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ORIGINAL COMMUNICATIONS.

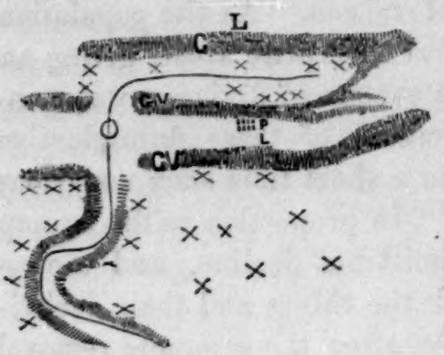
Medical Topography, with Observations on the Epidemic Dysentery of Lancaster County. With a cut. By D. H. Agnew, M. D., Philadelphia.

To prosecute our inquiries into the regions of epidemic causation with any prospect of success, the medical topography of a country should be made the first matter of consideration. Every physician who has devoted a few years to the active duties of his profession, will have discovered a tendency in certain diseases to apportion particular districts to their exclusive domination. The expression of such well marked local predilections, suggests at once the existence of some local principle favorable to their production; while their periodical visitations no less strongly prove the necessity for certain meteorological conditions to quicken them into activity. Now although we may not be able, by our present knowledge and means of observation, to isolate this subtle principle, or compel a respondence even by the most delicate reagents; still, with the overwhelming evidence before us, we are bound to admit its existence, and regret only the imperfection of

our analysis. When we glance at the wonderful results obtained by physicists in the various departments of physical science, not only in their investigations of the more gross forms of material substances, but in the appreciation and mathematical measurements of even those infinitessimal undulations of ether, which give rise to certain modifications of light, we have the greatest encouragement to believe that even the tenuous and highly sublimated principle of contagion will yet succumb to the triumphs of modern chemistry. If it be true then that disease can be localised, and indicated by geographical lines, undoubtedly a study of the physical peculiarities of such regions would be calculated to throw much valuable light upon their etiology. There is a prevailing expression among medical men, and obvious even to the eyes of the vulgar, that diseases have changed, and the natural interrogatory arises, to what are we to attribute this change? Judging from observations made in my own district, and which are submitted in a brief and cursory manner, I am forced to believe the explanation resides in the physico-moral history of a neighborhood. In the locality referred to, many years ago, intermittent and remittent fevers were the prominent and prevailing affections. The points which they respectively occupied, exhibit in a striking degree the dependence of each upon the same morbific cause, and it seems exceedingly probable that the degree of miasmatic concentration alone determines the type of fever. This may be modified either in consequence of the limited supply of productive materials, or locality. In elucidating the above, I will state that there existed in this region several quite extensive marshes. On the low grounds or valleys, contiguous to these sources of pestiferous emanations, intermittent cases greatly preponderate; while on the more elevated grounds, remittent fevers alone exist, showing a modification in its sensible effects either by admixture or altitude. The influence of locality was most decidedly expressed, in another portion of the same district, where those families residing on the east side of a marshy portion of ground were invariably affected with ague, whilst the inhabitants on the west, many of whose houses were on its very verge, entirely escaped. These facts I attributed to the currents of air. During clear weather the north-western winds prevail, wafting these paludal exhalations over the dwellings of the eastern resi-

dents. On the other hand, when the contrary or eastern winds existed, they were generally accompanied by rain, and those meteorological conditions of air, light and heat unfavorable to either the elimination or diffusion of miasm. As the population increased, and a spirit of agricultural enterprise arose, giving an impetus to the value of property, a system of drainage was commenced with a view to the reclamation of these unproductive spots; the consequence was, that in a short time such malarious sources began rapidly to disappear. In proportion as the swamp extermination proceeded, did intermittents decline, and the remittents which previously occupied the ridges and their declivities, descend into the valleys. Even after the complete removal of the stagnant accumulations of water, these still furnished materials for the production of a certain amount of malaria, in consequence of the streams which flowed through them being narrow and tortuous, and thus rendered inadequate to conduct away any unusual accumulations of water which occurred during violent rains. At such periods large quantities of decomposed organic matter were carried down by the swollen tributaries from the hill sides; and the main channel overflowing its banks, a rich deposite was left upon its subsidence, to be acted upon by solar heat. In the mean time the profits arising from grazing cattle began to attract the attention of agriculturists; the meadow lands, from the character of their grasses being eminently adapted for this purpose, assumed a new degree of importance, and measures were put at once into operation, to render them as valuable as possible by widening and straightening their channels. By this improvement they seldom overflow; and for the last few years, remittent fever has almost entirely disappeared. The present affections which, from their numerical strength, rise to the rank of prevailing or epidemic diseases, are typhoid fever, and dysentery. The exanthematous class, originating as they do, in a specific poison, and communicable by contact, of course it is not presumed to make them dependent upon any local influences of a physical character. The employments, and alimentation of our race at the present day, are calculated to develope the nervous unduly over the muscular system, and this very disproportionate distribution of nutrition may be rationally invoked to explain the prevailing typhoid complexion of our fevers. The

partiality manifest by colitis for those portions of my district marked upon the cut, I am disposed to attribute to geological causes.



Explanation of cut.

G represents the ridge known as the Gap; GV the two called the great valley hills. O the Octorara, a large stream arising between the hills G and G V, and and finally emptying into the Susquehanna above Port Deposite. P the village of Peningtonville on the Columbia R. R. L the limestone hill. And the asterisks (*) the portion affected with dysentery

The country represented here embraces a portion of Lancaster and Chester counties. It will be perceived that there are three chains of ridges running almost parallel with one another, and dividing the intermediate country into three distinct valleys. two of which, the most northern and southern, known as the Pequea and the Great valleys, are of very considerable extent, while the intermediate one, in consequence of spurs being sent off from the adjoining hills, is converted into a basin of a few miles. Within the northern and middle ridges, the tributary sources of the Octorara arise, the main stream of which is seen taking a course west and south, skirted with high hills on either side. The vallies, north and south, are limestone; and reposing against the southern declivity of the middle ridge, is seen the village of Peningtonville on the edge of the Great valley. In all the epidemics which I have witnessed of the disease, this village invariably furnished the first cases. In 1842 the disease commenced about the first of August. The month of July previous contained fifteen days of unfair weather, seven of which were showery, and from the 27th to the 31st the thermometer did not fall below 95° during the day. For a short time previous, various intestinal disorders presented themselves, foreshadowing its approach. The first cases occurred at Peningtonville, and from thence it extended north, invading all that portion of the neighborhood marked by the asterisks, to the Pequea valley, (a limestone district) where it was arrested by this apparent cordon sanitaire. Striding over the Great valley immediately in front of

the village, (also limestone,) it appeared immediately on its southern verge, and travelled in that direction far beyond the limits of my district. In 1844 it again appeared as an epidemic, commencing at the same point, and observing precisely the same route of invasion. The first cases occurred about the 5th of May, but did not extend very rapidly until toward the beginning of July, after which they greatly multiplied. The month of May previous, was analogous to that of the July preceding the epidemic of 1842, in having sixteen unfair days, seven of which were likewise showery. The months of June and July of the same epidemic were also singularly alike. Each had five days in which the average temperature was 97°; each had light cloudy, three wet and two foggy days. In the disease of 1842, a decrease in the number of cases occurred after the 13th of September; and on the 23d was brought to a sudden arrest by a brisk frost; no new cases took place after that date, and such as were laboring under an attack, commenced a rapid convalescence. In the one of 1844, the declension was very gradual and straggling; cases were seen until the weather became decidedly cool. Now, in neither of these visitations of the disease, did I have a single case occurring in the families of those residing in the valleys and using limestone water, and it is to this cause that I am disposed to attribute their exemption. In what manner limewater acts as a prophylactic is not easily explained; for with many, water thus impregnated deranges the bowels very considerably. The power of lime as a disinfecting and corrective agent, is generally admitted, and it may perhaps exert some alterative action in the system, rendering it insusceptible to morbid impressions of this character.

Why the colon should be the seat of disease in preference to any other portion of the intestinal canal, is another question of some obscurity. May it not be accounted for on the ground of difference of function? The small intestines are more exclusively the organs of absorption. The chyme being a bland unirritating mixture, rather protects the mucous coat of the bowel from injurious impressions than otherwise; while the large intestines being the receptacle of the excrementitious matter of alimentary substances (unfit for the purposes of nutrition) and the various secretions of intestinal glandulæ, are exposed to much greater

mechanical irritation, in addition to which the developement of gases arising from a degree of decomposition going on, may add to the efficiency of this cause.

The disease, as it prevailed in Lancaster county, commenced with the ordinary griping pains, frequent inclinations to evacuate the bowels, attended with straining, tender belly, and the discharge of a small portion of mucus of the consistence of jelly, and generally intermixed with streaks of blood. Others passed a thin brown fluid containing long, tough, and tenacious shreds, similar to the scrapings of guts. The tongue was sometimes loaded with a heavy brown coat; at others, dry and red; the heat of skin somewhat elevated above the natural standard, and in about 24 hours subsequent to such evidences of indisposition, a symptomatic fever set in. In those cases where but little blood appeared in the evacuations, the sufferings of the patients were much aggravated, and the tenesmus more annoying, amounting to tormina, and such appeared to indicate a higher degree of inflammation, and demanded the employment of active antiphlogistic remedies. When the bloody discharges preponderated, my impression was that the congestion and inflammation were, to a certain extent, relieved by this kind of local depletion.

Treatment.—On this subject, much diversity of opinion exists. The use of the lancet is viewed by many with great distrust, and not unattended with danger, while that of mercury as downright injurious, and deserving utter proscription. Some admit the propriety of occasionally administering a mercurial, merely with a view of stimulating the hepatic apparatus, but rely mainly upon opium for subduing the intestinal disease. While others discard, in the main, all the above, and treat every case by a thorough course of purgatives, either with a view to relieve the engorged state of the mucous membrane, or dislodge accumulations of hardened scybala, visible, in most instances, only to the eye of faith. The great reason why the abstraction of blood is not deemed requisite in this affection, arises, no doubt, from an under estimate of the grade of inflammatory action, and this is the rock upon which many an unfortunate patient is sacrificed. The truth is, the disease is one of intense phlogosis, otherwise it would be impossible to explain the organizations and extensive structural alterations revealed to the pathologist. The pulse,

though a pretty correct guide in most diseases, fails in many cases of dysentery to indicate the degree of danger; and hence, if we expect to find the full bounding vessel as in pleuritis, or the hard contracted one characteristic of peritonitis, we shall be very greatly disappointed. Again, if the administration of mercury be practised only under the idea that the liver is permanently affected in all cases of colitis, we think such will be doomed to disappointment, as the investigations of the ablest pathologists fail to establish hepatic complications, other than accidental to the general disorder. For many years back I have been induced to adopt the opinion, that in the secretions furnished by dysentery, we have the evidence of a peculiar form of phlogosis, analogous in many respects to that of croup, and most amenable to those remedies which exert a modifying power over the blood, or what may be termed antiplasmic agents. The efficiency of mercury, where such are indicated, is unquestionable, and it has always been with a view to its alterative action that I have prescribed it. In the management of colitis, two ends have been kept steadily in view, and the satisfactory results obtained confirm me in the course pursued.

First, the removal of all sources of irritation; and, secondly, alteration, both of the sanguine fluid and the secretory function of the parts involved. To effect these ends, when called to a patient, provided there exists much pain, tender belly, and the dysenteric discharges, I opened a vein and abstracted a quantity of blood sufficient to make a moderate impression upon the circulation, after which, a mild cathartic, such as the Oleum Ricini with xxx. gtt. Tinct. Opii were administered. By these means I got rid of several sources of irritation, as, for instance, a portion of the blood itself (which, when altered in its constitution, may act as any other foreign body,) thus enabling the engorged capillary vessels to empty themselves, and by the removal of all fœcal accumulations and morbid secretions. Having accomplished this, the next step was to place the intestines at perfect rest. By so doing we lower the demand for blood, diminish the depraved functional activity of the parts, and allow the process of repair to go on uninterrupted. In order to effect this, modify the blood and change the secretory action of the vessels. Opium, in combination with calomel, was next adminis-

tered. Sub. Muriat. Hydrarg. v.—vii. grs. Pul. Opii. vi.—viii. grs. Pul. Ipecac. vii grs. To be divided into four powders and one taken every three hours. If after a time, narcotization occur, the opium should be omitted and the calomel continued, resorting to the former again as soon as the condition of the patient will admit. If the tenesmus continued troublesome, an enema consisting of a little thin starch, to which was added one teaspoonful of Tinct. Opii, generally quieted the bowel. This reflex phenomenon, analogous in many respects to the expulsive efforts of the uterus, is one of the most distressing and harassing attendants of dysentery. In the use of injections to relieve this symptom care should be taken that a very small amount in bulk be employed, as otherwise the stimulus of distension may provoke the bowel to expel it. After the use of the above means, if much tenderness continued over the abdomen, cups were employed with the best results. Leeches would answer equally well, and perhaps in some respects better, but inability to command their use in the country prevented their employment. After the local abstraction of blood, the abdomen was covered by a light, warm, hop poultice, which by its derivative and anodyne effects will be found a very comfortable application to the patient. The drinks employed were barley water, infusion of the ulmus fulvia and benne leaves. This last named article seemed peculiarly appropriate. After the violence of the acute symptoms had passed over, and the bowels still continued to be intolerant of pressure, a fly blister was applied, and after its removal dressed with the ung. hydrarg. fortius. In cases where the discharges were mixed with much blood, the acetas plumbi constituted a valuable addition to the mercurial prescription in doses of three or four grains ; and, indeed, whether the evacuations were of this character or not, if the tongue became red, dry and glazed, the exhibition of lead had a decidedly good effect. For several years I have observed the efficacy of this article in subduing that condition of the mucous membrane of the intestines indicated by the red, dry and glazed tongue, not by any means peculiar to colitis alone, but frequently to be met with in typhoid fever, scarlatina, and as accidental in the course of other febrile affections. In such, it seemed to answer best when administered in solution. Pursuing the above plan, no sooner

did the system begin to acknowledge the specific action of the mercurial, than, in the great proportion of cases, the symptoms gave way and convalescence set in. The very mildest action was all that was necessary; and hence, as soon as the least tenderness of the gums or the mercurial fetor was observed, it was either suspended altogether, or, when considered requisite, given only at such intervals as would preserve the impression already made. Occasionally a case would prove rebellious, the stools become more frequent, containing membranous shreds, the belly retracted, the pulse fail, and a disgusting stench emanate from the patient, attended with a confused state of mind. Such a concurrence of symptoms betokened a very serious state of things, and when accompanied by the entire and sudden suspension of pain, likely to prove fatal. The treament adopted in these cases was such as would be calculated to sustain the general system and act upon the diseased surface, arousing, if possible, a degree of vitality sufficiently vigorous to insure its restoration. It is at such a crisis that an appropriate article of nutrition becomes necessary. The one employed was beef essence, and embodying as it does a large amount of nutritive matter in the smallest bulk, and the most unirritating form, we should be unwilling to exchange it for any other article of dietetics in general.

It is at this stage of the disease, as I understand it, that the favorite prescription known as Hope's Mixture is said to prove so curative, and notwithstanding it was employed with strong prejudices in its favor, it proved utterly powerless in my hands; neither did the employment of nitras argenti, so highly recommended in cases of extensive ulceration, produce any reliable results. That which undoubtedly displayed the most decided influence in this stage of the disease, was the following mixture: Ol. Terebinthinæ, ʒiss. Tinct. Catechu, ʒii. Tinct. Capsici ʒii. Tinct. Opii. gtt. xl.; Mucil. Gum Acaciæ ʒiv. Of this one tablespoonful was given every three hours, and likewise Sulph. Quiniæ grs. ij. every four hours, and where the strength of the patient was not too much exhausted, the belly and hips were immersed in a warm bath. Under this treatment, with an occasional dose of pulv. doveri, and the regular use of beef essence, the most encouraging results were obtained. The average dura-

tion of the disease was eleven days. The following table will exhibit the result of ninety-six cases as they occurred indiscriminately:

NINETY-SIX INDISCRIMINATE CASES.

Age.	*Number of Cases.*	*Mortality.*
Under 5 years,	19	3
" 20 "	30	2
" 50 "	39	3
Over 50 "	8	0
Total,	96	8

The administration of even the mildest aperients was not resorted to after the commencement of the disease, unless under certain peculiar circumstances; as, for instance, where the opium effectually blocked up the intestinal discharges for forty-eight hours or more, and even then I much preferred an enema of simple warm water, or warm flax-seed tea, when such had the desired effect; or where the disease attacked gross livers of a full plethoric habit and presenting bilious symptoms; in such, the occasional use of the ol. ricini, to remove the vitiated biliary secretions, was certainly attended with good effects. In reference to the exhibition of mercury, I am aware much prejudice exists, and it is quite certain that many who condemn its employment may have had to deal with colitis under some aspect unfavorable to its use; but in all sincerity I can say, having tested it in those extensive visitations of the disease, and being to thoroughly convinced of its beneficial effects, that to be compelled to encounter a similar epidemic without it would be so feel shorn of half my strength. It does not appear to me that opium exerts, in the management of dysentery, any direct curative effects, but acts much in the same way as the splint in a fractured limb, by keeping the parts at perfect rest while nature performs the cure. This is a very important indication, and hence the utility of combining it with calomel.

The meteorological conditions which seem favorable to the production of colitis, are dull, cloudy weather, accompanied by frequent storms, and an elevated temperature; and of those which favor its declension, none appear more decided than the occurrence of a brisk frost.

In conclusion, it will be perceived, that so far as my observations extended, lime-stone districts have enjoyed a singular security, and to the fact of the inhabitants using water impregnated with lime, has this immunity been ascribed.

Laryngotomy successfully performed in a case of Foreign Body in the Larynx. By G. R. MOREHOUSE, M. D., Philadelphia.

To the Editors of the Medical Examiner.

Gentlemen,—I send you the history of the case of "Foreign Body in the Larynx," upon which I recently operated.

The little patient, a girl of ten years, daughter of Mrs. Saunders, on Wednesday morning, February 26th, while laughing and romping with her school-fellows, drew into the larynx a piece of almond-shell, which she had been holding in her mouth. She was immediately seized with a prolonged paroxysm of coughing, followed by dyspnœa and loss of voice. As soon as aid could be obtained, she was carried home, and Drs. Scoffin and Gegan successively sent for. Under their hands every medical means for disengaging the shell was tried; the œsophagus also was explored, and instruments used to force any thing contained therein into the stomach; but every effort seemed in vain. The dyspnœa increased and the paroxysms of cough became more incessant and more fatiguing. The only remaining mode of relief was the removal of the foreign body, through an opening in the windpipe. Accordingly, on Thursday afternoon, I was called to see the child and operate, if advisable. At that time the condition of the little sufferer proclaimed the necessity for immediate aid. The face was turgid and of a purplish hue, the eyes protruding, and slightly divergent, the mouth circled with a white zone, and the nostrils distended and pale, forming a countenance expressive of mingled anxiety and despair, the head was inclined forward, and the muscles of forced inspiration strongly contracted, giving to the neck the appearance of great emaciation. Deglutition seemed unimpaired, and she was able, with apparent ease, to gratify her craving thirst. Respiration was with difficulty maintained, and was accompanied with a wheezing sound, similar to that heard in

asthma, although much more feeble. She complained of no pain, except when lateral pressure was made on the larynx. She seemed disinclined to exertion, except at intervals, when her motions were hurried and restless. She seemed fully to appreciate what was passing around her, and spoke to her friends in whispers, repeatedly expressing a wish to die.

Upon auscultation, the respiratory murmur, although barely discernible, was found alike free in either lung; there was no rattling sound to indicate the presence of a loose body in the trachea. Over the larynx, however, a whistling sound, as of a person blowing through a quill, was distinctly heard. These facts, therefore, the incessant cough, the dyspnœa, the pain on pressure, the whispering voice, and the whistling sound of constriction, all pointed to the ventricles of the larynx as the position occupied by the foreign body. By the time that these necessary examinations were made, and the mother's consent to the operation obtained, it had become too dark to operate without the aid of artificial light. The extreme condition of the patient, however, rendered it necessary that an opening, at least, should be made in the windpipe, to prevent death from apnœa. The operation of laryngo-tracheotomy, as originally suggested by Boyer, was selected as most appropriate. The patient was placed upon the table, and an attempt made to commence the operation. The violent convulsive struggles of the child, and the forced forward flexion of the head, rendered it impossible to proceed. Ether was therefore administered, sufficient to quiet, without producing its full anæsthetic effect. The superficial tissues were then divided in the middle line, by a cut nearly three inches in length, the isthmus of the thyroid body was separated from its attachment, and the plexus of thyroid veins pushed aside with the handle of the scalpel. The windpipe thus being laid bare, and the hæmorrhage slight, as soon as the effect of the ether had passed away, the knife was entered just below the crico-thyroidean artery, dividing, as it was withdrawn, the cricoid cartilage and three upper rings of the trachea. The air rushed from the wound as soon as the knife was removed, blowing before it the blood which flowed from the cut. The patient was raised and placed in a position favorable for the outward flow of the blood.

The relief experienced by the child was immediate and most gratifying, the black blood sunk from the face, the asthmatic breathing ceased, the laboring muscles were at rest, and the countenance, a moment since livid, swollen and inexpressive, was now lit up with a smile of gratitude. As soon as oozing had ceased, examination was made for the foreign body, and it was found effusion had taken place in the sub-mucous tissue, almost obliterating the cavity of the trachea at its upper portion. So great was the swelling that it was impossible to introduce an instrument through the rima glottidis, with the hope of extricating the shell; it was, therefore, proposed to continue the incision upward and divide the thyroid cartilage. On account of the prostrate condition of the child, however, and in hope that the œdema would subside and render the extension of the operation unnecessary, it was concluded to defer the division of the cartilage until the morning. In the mean time a conical curved tube, flattened laterally, was introduced through the opening, and secured by means of tapes passed round the neck. An anodyne was administered, and the patient left for the night.

On the following morning, the appearance of the child was propitious, she had rested well during the night, being troubled but little with cough; the tube had occasionally clogged with mucus, but was readily cleared with a feather. The œdema in the trachea had greatly subsided; the chords were, however, in apparently as close proximity as ever. It was decided, therefore, to open the thyroid cartilage, and for this purpose a probe-pointed bistoury was prepared in the following manner. A coating of wax was applied to the sides of the blade, thus converting it into an edgeless instrument, which having passed between the lips of the *rima*, would glide along without injuring them, to their junction with the thyroid cartilage. The bistoury thus prepared was entered at the previous opening, passed between the chords, and with it the cartilage divided. The crico-thyroidean artery was cut, but was readily sealed by the application of a point of caustic. The cartilage was pressed asunder and the piece of shell removed from the left ventricle, by means of a pair of polypus forceps. The tube was permitted to remain in the wound until the swelling of the glottis had subsided, which could

readily be judged of by the facility of breathing when the tube was closed. On the second day the tube was removed, and the wound closed with stitches and adhesive plaster. In order that the sides of the wound might be brought in apposition throughout their whole depth, a compress of a double headed roller was employed, the roller (half-an-inch in diameter) pressing parallel to the cut on either side, and bound to the neck by means of a bandage.

The cut has healed kindly and rapidly; the water dressing was used, and parts of the surface occasionally touched with nitrate of silver. The wound was entirely healed, on March 12th, fifteen days after the operation, the child's voice is as clear as ever in the morning, but towards evening is somewhat husky, especially if she is disobedient and talks much during the day.

Surgical Cases communicated to D. GILBERT, M. D., Professor of Surgery in the Medical Department of Pennsylvania College, Philadelphia.

To the Editors of the Medical Examiner.

The cases herewith sent I believe to be sufficiently interesting to secure for them a place in your valuable monthly periodical. The first two cases are from my friend, NATHANIEL WATSON, M. D., of Lancaster county, Pennsylvania.

CASE. I. In the summer of 1825, I was called to Jos. Bougher, at Graysbills mill. I found him, about an hour and a half after the accident, lying upon a mattrass on the floor. As I entered the room, Mrs. G. said, "Doctor, Joseph is dead." I discovered a dislocation of the cervical vertebræ below the origin of the phrenic nerve. I placed a foot on each shoulder, grasped the head firmly and stretched the neck with a rotary motion. The vertebræ returned to their place; the head had been twisted to one side. He began to breathe visibly very soon after. After rubbing the extremities for some time, his pulse returned—continuing the frictions with spirits, he opened his eyes in about an hour after the dislocation was reduced, and attempted to sit up. He became frantic in another hour, with hard and rapid pulse, for which he was bled freely. He was kept in bed, in a dark room, aperients were given, with cooling acidulated drinks and low diet,

which was strictly enjoined for five days. On the eighth day he was able to walk through the room, free from all unpleasant symptoms and mind perfectly clear. In two weeks from the time of the accident he returned to work." He had sustained the injury by falling from a wagon loaded with hay, and was taken up for dead by the other hands.

Case II. "On the 14th of July, 1842, I visited a grandson of Esquire Missimores, who, 22 hours previously, had fallen from a cherry tree. The head was twisted to the left side, there was no feeling in the extremities, pulse feeble, respiration slow and stertorous, pupils dilated, extremities cold, &c. I pronounced it a case of dislocation of the vertebræ of the neck, and gave it as my opinion, that the boy would die if the luxation was not reduced; and, at the same time informed him, that he might die during the attempt, as well as subsequently to reduction. I reduced as in the case of Bougher. Frictions were made to the extremities, and spirits applied to them for one hour before he was was restored to consciousness, when he complained of pain in the neck and head. Respiration and pulse were gradually restored, and the extremities became warm. Ordered an enema, and requested that he should be kept quiet.

15th. Pain in back of head, pulse hard and quick, took ℥xij. of blood from the arm, applied cups to the temples, ordered purgative mixture, and then to apply a blister to the nape of the neck, and preserve quietness.

16th. Found him much better—continue quietude and spare diet.

18th. Continues to improve, and is apparently out of all danger.

22d. Discharged him."

These cases are exceedingly valuable in demonstrating that the vertebræ of the neck may be dislocated, and yet recovery follow. All the cases hitherto published, so far as my reading has extended, have had a fatal result. There are two cases reported in St. Bartholomew's Hospital reports, one of which died on the same day, the other in 32 hours after the accident. Another case is reported by Mr. Stanly, Royal Hospital, Harlan, died on 3d day. A case occurred in the New York Hospital, which terminated fatally on the 3d day; and the last case re-

corded may be found in the Boston Medical and Surgical Journal for August last, furnished by E. K. Sandborn, M. D., of Lowell, Massachusetts, death on the 8th day.

Case. III. Furnished by my friend J. G. Lightner, M. D., of Shirleysburg, Huntingdon county, Pennsylvania, presents points of interest, and therefore is also respectfully submitted for publication.

On the 15th of June, 1851, I was called to see a female child of Mr. B.'s, æt. four years, small of its age, and very thin in flesh. I found her with a slight fever and somewhat restless. On examination I discovered in the left lumbar region a tumor, which was moveable, and in size about that of an infant's head at birth. Immediately above the umbilicus there was a projection about two inches broad, and not more than three-fourths of an inch thick, as if some hard substance was pressing from within. Pressure made on it with the fingers did not produce pain or uneasiness. This was not moveable. I made up my mind that it was a tumor, but as to its nature I could not decide; and the part that projected above the umbilicus I thought might be some osseous substance, from its hardness. I gave the child a cathartic, which operated freely, and directed a febrifuge solution, and in a few days she was as well as usual. She never enjoyed good health after she was a year old, and her mother thought she felt a lump in her side long before she said anything about it. I did not see the child again until some time in October last, but occasionally heard that the lump was on the increase, that the hard projection had descended below the umbilicus, and finally was lost in the tumefaction of the abdomen in general. During this time her parents had given her various vermifuges, from the belief that it might be worms, and indeed some of the neighbors had persuaded them that it was a large tape worm.

Dr. Brewster and I went out some time in the above month to see the child, and we were not a little surprised to find its abdomen extended from above the scrobiculus cordis to the pubes, and laterally to fully the size of a woman's abdomen at her full period of gestation. The lower extremities were œdematous and very much swollen, and her upper extremities, together with her face, were very much emaciated. On percussion of the abdomen

I found no fluctuation; the abdomen had the same dull sound, in all its parts, indicating solidity. We concluded that the operation of paracentesis would not increase the danger, for the case was hopeless. I selected about midway between the umbilicus and pubes; after dividing the cutis, I inserted the trochar about two inches, and found considerable resistance; I withdrew the stilet, and nothing followed but blood, which amounted to about half an ounce; the child was somewhat relieved for a few days, but her abdomen continued to increase in size, if possible, so that the cutis seemed as if it would give way and let out the whole contents. She became more restless, œdema of the lower extremities and emaciation of the upper extremities increased, and on the 20th November at two o'clock, A. M., she died. I had previously obtained leave of the parents to make a post obit examination. Dr. Brewster being from home, I had no medical assistance. I made the examination of the case about 4 o'clock, P. M., (assisted by two women.) On opening the abdomen by an incision from the scrobiculus cordis to the pubes, the tumor made its appearance, which I found, by introducing my hand, had not formed any very extensive adhesions; I could easily separate them with my hand as I passed it around the tumor, but there was some difficulty in doing this for want of room. I discovered that its pedicle was about four inches in extent. I divided it with a scalpel from its attachment, and found it to be pretty solid, spherical in form, and composed of two lobes. I believe now that it was the corner or edge of one of these lobes that formed the solid projection above the umbilicus. Its weight is seventeen pounds and a quarter, and measures thirteen inches in diameter. It appears to be an adipose tumor, with a cavity of small extent filled with bloody serum, and a substance resembling soft cheese. The intestines were crowded to the right side, and had a natural appearance; the liver was forced upwards against the diaphragm; the kidney was rather higher than usual, and the aorta and ascending vena cava passed through under the tumor; these vessels appeared to suffer from pressure, and I believe that the tumor was nourished from a branch of the aorta, which was sent off a little distance above its bifurcation.

An account of the operation of Tracheotomy for the relief of Croup—of Lithotomy under etherisation, and of Amputation of the Left Half of the Upper Jaw. By HENRY H. SMITH, M. D., Surgeon to the St. Joseph's Hospital, Philadelphia.

The attention of the profession having been recently called, through the American Medical Association, to the importance of forming accurate surgical statistics, in order to obtain a correct estimate of the value of certain operations, the following cases are submitted as a contribution to the facts already published, on the subjects mentioned at the head of this article. As the object of the paper is to place these results in such a position as may render them available towards the formation of statistics hereafter, the account of each operation will be presented very briefly.

I. *Tracheotomy performed unsuccessfully for the relief of membanous croup.*—C——y, æt. 19 months, a large healthy boy, has had several slight attacks of false croup. His brothers, æt. 7 and 4 years, have also been subject to the same complaint, and his cousin, æt. 8, died recently of membranous croup. Nov. 23d, 1851, C—— was attacked with symptoms of croup resembling those of the other children, and of a former attack, and was therefore treated by the parents with lamp oil and other simple means. The next day, as he was no better, a physician was sent for, who deeming the case a mild one, directed the use of Coxe's hive syrup until relief was obtained. On the 24th and 25th the child appeared better, but on the 26th was again so much oppressed as to require medical aid, when the physician again directed the hive syrup, which vomited it freely. On the 29th, the child continuing to be much oppressed, the parents became dissatisfied, the physician was dismissed, and other advice sought.

In the afternoon of the same day, Nov. 29th, I saw it. The voice was now nearly inaudible, the cough sharp and barking, the respiration oppressed, and it had all the other well marked symptoms of croup. Suspecting from the history and symptoms, that the case would prove to be an insidious attack of membranous croup, I at once examined the fauces. The half arches and entire pharynx were of a dusky red color, the tonsils slightly swollen, with one or two spots of lymph upon their posterior surface, whilst a patch of the width of the little finger was adherent to the

middle line of the pharynx, extending downwards. I immediately directed a solution of the nitrate of silver, grs. xl. to the ounce of water, and swabbed the entire surface of the pharynx and top of the glottis, with a piece of sponge wet with this solution. The application of the sponge brought away a considerable amount of whitened mucus, the escape of which was facilitated by the vomiting induced from the administration of a teaspoonful of powdered alum, every 15 minutes, as advised by Dr. Charles D. Meigs of this city.* Thinking that the exhaustion and debility forbade the abstraction of blood, either locally or generally, the little patient was put under the free use of calomel; rubefacient and stimulating frictions were made on the throat: the temperature and moisture of the air of the chamber carefully watched, and directions given to repeat the emetic with the addition of a warm bath if required, in the interval of my visit. Seven hours subsequently the child seemed easier. For a day or two these symptoms alternated, and the treatment was so changed as to add to the former remedies the free use of mild expectorants, until Monday, Dec. 1st, when at 12 o'clock M., the child suddenly became worse, it having during these days taken xxiii. grs. of calomel, without any signs of salivation. The respiration was now very difficult, and accompanied by great distress and anxiety, the skin cold and damp, with other symptoms of impending suffocation. I at once advised the operation of tracheotomy, which was readily assented to by the parents.

At 2 o'clock P. M., assisted by my friend Dr. Ellerslie Wallace and several office pupils, I operated according to the plan recommended by Dr. Pancoast,† excising a portion of the 3d, 4th and 5th rings of the trachea, and keeping the opening dilated by means of a ring, formed of pewter, the hooks of which were inserted upon the edges of the wound. After the spasm consequent on opening the trachea had passed off, the mucous membrane was carefully examined, and presented a perfectly natural appearance, being free from all signs of false membrane, in consequence of which the prognosis was deemed favorable. The incisions required during the operation were followed by a copious hemorrhage, and required the application of several ligatures in order to arrest it.

*See Medical Examiner, Vol. I, p. 414, 1838.

† American Journal of Medical Sciences, Vol. 17, N. S., p. 307, 1849.

At 4 P. M., the child was asleep and breathing easy; and through the attention of Messrs. Rommel, Wellford and others of my private class, was now carefully watched, the mucus being wiped out of the wound as it collected, and every possible attention paid to its condition.

Dec. 2d, 9, A. M. The little patient was apparently doing well, and had nursed repeatedly, but the tracheal mucous membrane looked red and dry; patches of dry mucus or lymph were also seen upon the edges of the wound, whilst a thick ropy expectoration occasionally escaped through it in the efforts to cough. The dryness was relieved by the use of a camel's hair pencil, wet with glycerin and water.

At 10, P. M., the child was sleeping quietly, with a good prospect of recovery; at 2, A. M., its respiration became impeded by a collection in the trachea, which, owing to its viscidity, was wiped out with difficulty by the pencil, but after this it again went to sleep.

At 4, A. M., it had another attack of dyspnœa from a similar cause, and under this commenced to sink, and died at 6, P. M., just forty two hours after the operation.

The publication of a few successful cases having lately induced some who have read them to anticipate much success from the operation of Tracheotomy, even when not resorted to until the last moment, the account of the fatal cases becomes especially necessary, in order to guard against a false conclusion. Although this child had been suffering from the disease for eight days, there was no false membrane about the trachea at the point where it was opened, and both Dr Wallace and myself noticed the natural appearance of the lining membrane of the canal, and anticipated from this a favorable result. Yet with every care death ensued within 48 hours after the operation.

Having recently had occasion to examine the results as shown in the sum total of such cases as have been reported, it is made evident that the success of this operation is not encouraging; as out of 245 cases 188 have died, being more than three-fourths of the whole number operated on.

2. *Lithotomy performed while the patient was under the influence of an anæsthetic.*—Joseph ———, from Delaware, æt. 8

years, was brought to me by his parents on Jan. 5th, laboring under the symptoms of stone in the bladder. A pebble about the size of a grain of coffee, was also shown, as having been passed when he was but 18 months old. After a short interval of rest, I sounded him, but his cries and struggles rendered a positive diagnosis impossible. A few days were therefore allowed to elapse, during which the free use of the warm hip bath, together with alkalies and anodynes internally, afforded much relief. The child was, however, very pale, delicate and irritable, and having been freely indulged by his mother in every whim, very intractable, screaming most lustily as soon as I entered his room.

A consultation being called, I determined to etherize him before introducing the sound a second time; but owing to his struggles at the approach of any one except his mother, was compelled to have him held on the bed whilst the sponge was retained to his mouth. In a few minutes, however, he became perfectly relaxed and tranquil, during which he was carefully sounded, and a stone distinctly felt in the lower part of the bladder. When the effect of the anæsthetic passed off, the little patient had no recollection whatever of the event, nor did he subsequently show any constitutional disturbance from the introduction of the sound. A few days more being deemed requisite in order to allow the extreme irritability of the bladder to pass off, the constitutional treatment was continued, but no intimation given him of the proposed operation.

On Wednesday, Jan. 14th, after being induced to smell the sponge in his room, (which he now did very willingly,) he was thoroughly etherized, and whilst in that condition, was carried up stairs to the amphitheatre of the University of Pennsylvania, where he was again sounded, and the stone being distinctly felt, was placed in the position for lithotomy. I then immediately performed the lateral operation of lithotomy, opening the bladder by means of Physick's gorget, and extracting a stone weighing upwards of five drachms, when the patient being untied, was carried to his bed, and the effect of the anæsthetic allowed to pass off; he subsequently declaring that he knew of nothing being done to him until placed in bed, when the flow of urine over the wound excited his sensibility. During his convalescence no bad symptoms were apparent, except a hemorrhage on the fourth day after the

operation, consequent on his having accidentally pulled off a a ligature that had been placed upon one of the perineal arteries. In five weeks he returned to his native place, and has since, I am told, been entirely well.

The propriety of resorting to anæsthetics in operative surgery, is a question which fortunately for humanity is now doubted by few. As a general thing, I employ one part of chloroform to five parts of ether in nearly every instance, though in a case of lithotomy which I performed in the winter of 1851* upon an adult, and from whom I extracted a large and very rough stone weighing ℥ij. grs. xvii., the use of an anæsthetic was deemed unadvisable, in consequence of the intemperate habits of the patient rendering it imprudent to give him the quantity necessary to etherize him.

3. *Amputation of the left half of the upper jaw.*—E. F——d, æt. 48, had been laboring under a malignant tumor of the antrum for about six months, which was increasing so rapidly as to render it necessary to submit the question of the propriety of removing it to a consultation. After carefully reviewing the peculiarities of the case, it was decided that though there was reason to suppose the disease could not be eradicated from his system, yet the patient's life might be prolonged for many months by the operation, as had been the case in the operation reported by Dr. Horner.† The precise nature of the disease, as well as the other doubtful circumstances being fully stated to the patient, he decided "to entrust himself to Providence and his surgeon," and to submit to the operation. Accordingly on the 25th of February, 1852, he was brought before the medical class of the University of Pennsylvania, seated in a chair with his head well supported, and the anæsthetic administered, it being decided to save him the pain of the external incisions, but not to operate upon the mouth until consciousness had partially returned, lest the blood, by escaping into the throat, might induce suffocation. The first incisor tooth being extracted, I cut through the cheek by a slightly curved incision which extended from near the middle of the left zygomatic arch to a point in the upper lip about three lines in advance of the angle of the

* See Medical Examiner, vol. 7, No. 4, p. 233.

† Medical Examiner, vol. vi. p. 16, 1850.

mouth. The upper flap being then dissected up as far as the edge of the orbit and the anterior orifice of the bony nose, the masseter muscle was separated from its attachments to the upper jaw, and the patient found to be free from the effects of the ether. A fine saw was then passed around and behind the body of the malar bone, and its attachment to the superior maxillary divided.

The anterior edge of the palate plate of the palate bone being then separated from its articulation with the palate process of the superior maxillary by cutting it with a strong knife, and the middle palate suture being also divided from behind towards the alveolar process of the bone, the latter was sawed through from the nostril to the mouth. The nasal process of the superior maxillary was next sawed across on a level with the edge of the orbit, and the lower part of the bone cut off from the margin of the orbitar plate, after which an elevator was passed behind the superior maxilla, and its attachment easily overcome. A few touches of the knife through some fleshy fibres then enabled me to remove the bone nearly entire, the remaining portion of the orbitar plate being excised subsequently from below. A branch of the internal maxillary bled most freely during the last part of the operation, and so did some other vessels in the flaps, especially the facial, but the hemorrhage was perfectly controlled by the ligature without resorting to the actual cautery. The wound in the mouth being tightly packed with lint, that in the cheek was accurately adjusted by points of the twisted and interrupted sutures, and healed throughout its greatest extent by the first intention. The patient, six days subsequently, was able to sit up in his chair, presenting but little evidence of the loss of so considerable a portion of the bones of his face, and two weeks afterwards returned to his home.

A Case of Poisoning from the external application of the Cocculus Indicus. Reported by WILLIAM B. THOMPSON, Sen. House Surgeon, Emigrant's Hospital, Ward's Island.

Bridget Maddon—aged 6—native of Ireland—blue eyes and fair complexion, was admitted into the surgical division, accompanied by a sister and brother, on the evening of Feb. 3d, 1852. Disease—porrigo of the scalp, infected with vermin.

The nurse was directed, after cutting the hair close, to wash their heads with an infusion of Delphinia, (the house prescription.) Not having the article at the time, the apothecary sent an infusion of Cocculus Indicus, (used in the hospital for the same purpose,) made by displacement—a pound to three gallons of dilute alcohol—six ounces of which was used for the three children.

Half an hour after its application, I was sent for to see Bridget, whom I found laboring under tetanic spasms with the pupils contracted to their smallest diameter. As the spasm abated, the pupils became dilated to their fullest extent, and again contracting as the spasm returned. By touching the eyelids, the spasm could be produced at pleasure; this was repeated until all present became fully satisfied the difficulty was seated in the excito-motory system, and was the result of irritation rather than inflammation. The case was treated as one of idiopathic tetanus—with counter-irritation, warm baths and antispasmodics; but the attacks continued to increase in frequency and force, until the patient sank about midnight of the same day. A post-mortem examination was made of the body thirty hours after death. The viscera, brain, and its appendages, were minutely examined, and all found to be in a healthy condition. The nature of the case is confirmed by the younger sister, aged four, being attacked in the same manner and exhibiting the same symptoms as she (Bridget) did. Being in the Ward at the time, a warm bath was ordered, into which she was placed as soon as the first spasm was over; a mustard plaster was applied over the abdomen and to the legs and feet as high as the knee; injections of the tincture of assafetida were thrown into the rectum and a few drops administered by the mouth every hour. By persevering with these means the spasms subsided gradually after an elapse of three hours from the commencement of the attack. On the morning of the 4th inst. the patient's body and arms were again covered with an eruption resembling scarlatina, which gradually faded away during the day.

Remarks on Epithelial Tumors and Cancer of the Skin. By J. Da Costa, M. D., of Philadelphia.

Anything thing that might elucidate, or be in any way connected with the histology of morbid growths, especially with that of cancer, has been of late of so much interest to us, that it is astonishing, so few have noticed the evident difference, existing between epithelial tumors, and cancerous affections of the skin. All writers on morbid anatomy, who have at all alluded to them, have classed them under one head—cancer—without paying the least regard to their different microscopical characters, or to the different results, following the same treatment employed. The fact, however, of most of these tumors not returning, led some surgeons to propose the term local or epithelial cancer; and induced one or two modern pathologists, a few years later, to investigate this disease. The first of these was Ecker, the next Mayor,* who, although correct in some respects, fell into the other extreme, endeavoring to prove, that although all these tumors were cancerous, on account of their tendency to return, yet they assumed entirely the epithelial element, and that this formed the cancer in every instance. In this opinion he was supported for some time by the most eminent living pathologist, Rokitansky, who, p. 385, Vol. 1st, of his Handbuch der allgemeinen pathologischen Anatomie, says: "Epidermic cancers are like medullary cancer, only having epithelial cells as their constituents." From careful microscopical observation, however, we find that most of these tumors are really epithelial, only an hypertrophy of epidermis or epithelium, whilst others, entirely overlooked by Mayor and Rokitansky, have another element, and are cancerous. Lebert in the best, and in many respects, the only complete paper† recently published, has made this the basis of his division, and following the nomenclature of Bennett, divides tumors of the skin into cancroid and cancerous. This was the great standard to establish, and one to which every observer must at last come. I shall, therefore, follow Lebert's division, and speak of tumors of the

* Thèse sur les tumeurs épidermiques et leurs relations avec l'affection cancéreuse. Paris, 1846.

† Du Cancer et du cancroïde de la Peau. Paris, 1851.

skin, as epithelial or epidermic, and as cancerous tumors; not adopting the word cancroid for epithelial, but calling those epithelial or epidermic, that have no cancerous element. As epidermis is, however, epithelium, we might designate the tumors on the skin, that more strictly ought to be called epidermic, epithelial; and those cancerous, which are really cancer; avoiding the use of the word epithelial cancer, which has led to so much confusion, and which ought never to be used. I have examined about 40 cases, occurring on the lip, face, body, gums, and tongue; as they all presented nearly the same elements, and their treatment could be reduced to the same principles, I shall give but a general description, although, did the limits of this paper allow, I should have preferred noticing individually each part of the body, where they occur.

Epithelial Tumors proper

Constitute the majority of all cutaneous tumors, and are mainly but an hypertrophy of healthy tissue. They occur on the face, there constituting the so called noli me tangere, on the lip, trunk, back of hand, foot, gums and tongue. Most frequently do we meet with them in the lower lip. Bock mentions a case of an epithelial tumor being found in the conjunctiva; I have examined one that sprung from the knee joint. Out of 25 cases I have noted down, there were

Epithelial	tumor	of lip	11
"	"	face	7
"	"	trunk	1
"	"	extremities . . .	2
"	"	penis . . .	1
"	"	tongue . . .	2
"	"	gums . . .	1
		Total,	25

According to Lebert, these tumors, when they first appear, assume three forms; hypertrophy of the epidermis alone, hypertrophy of the papillæ, and hypertrophy with infiltration into the surrounding tissue. Belonging in some respects to the first variety, are a great many horny excrescences, some forms of corns, and other morbid growths, that result from continued pressure. The papillæ, when they become hypertrophied, form one of the

most singular constituents of epidermic tumors; they are found in many simple warts. The third form, which, extending to the muscles, can even infect the neighboring lymphatics, is usually the worst and last stage of development of epithelial formations. All these varieties are mixed in tumors we commonly meet with, for even those, which begin merely as hypertrophy of the epidermis, often terminate by infiltration into the surrounding tissue. These tumors, after they have been completely developed, exhibit a strange tendency to ulcerate; a tendency which is most marked in those on the lip and face, where they ulcerate, forming sometimes a smooth superficial, sometimes a reddish ulcer. The ulceration is in no case deep, but rather extends in length, begins from the surface, and not as in real cancer, from the deepest part of the tumor.

The general appearance of these tumors varies in different parts of the body; they all are elevated above the surrounding tissue, reddish on their surface, and very apt to inflame the neighboring parts. On the lip, they present either the appearance of a ripe mulberry, or a peculiar tuberculated form, and have a dark red crust on their exterior. On the face, they usually are about the size of a dime, and very red. In other parts of the body, they resemble in appearance very much the tumors of the lip; nearly all have on their surface, the same dark red crust.

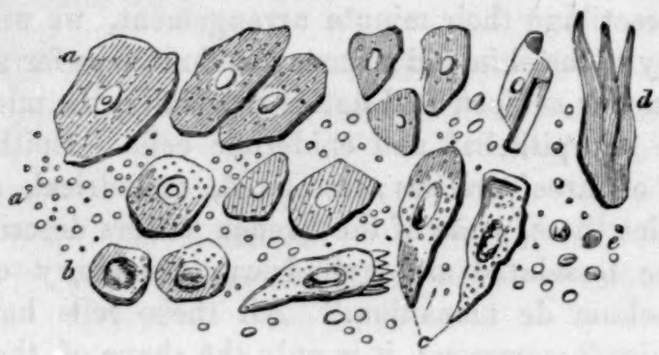
Before describing their minute arrangement, we will examine the anatomy of the skin and mucous membrane, as far as they are important to our subject, and notice especially, the microscopical appearance of epithelial and epidermic cells. Epithelial cells are usually of three varieties; tesselated, cylindrical, and vibratile. Besides these, some of the French writers describe a form, between the tesselated and cylindrical, transitory epithelium, the "epithelium de transition." All these cells have several characteristics in common; it is only the shape of the cell-wall, that determines the variety to which they belong. They are all held together by an intercellular substance, which acetic acid dissolves. All of them, further, have nuclei, and contain granular matter, light in some cells, but very dark in others, and never larger than the 1-15000th part of an English inch. The nuclei vary in size in different parts of the body; to determine their relative size, in comparison, with those of the cells found in epithelial tumors, is a matter of interest, as will be shown here-

after. As the following measurements of Henle,* are acknowledged to be the only accurate ones, we have on this subject, I cannot do better than insert a condensed translation of his table.

Nuclei of cells from the sole of the foot,			0.0026	of a Paris line†	in diam.
"	"	glans penis,	0.0022	"	"
"	"	tongue, 0.0020	0.0042	"	"
"	"	deeper layer, 0.0011	0.0016	"	"
"	"	mouth, 0.0030	0.0050	"	"
"	"	peritoneum,	0.0040	"	"
"	"	mammary gland,	0.0022	"	"
"	"	vagina,	0.0040	"	"
"	"	nasal canal,	0.0027	"	"
"	"	trachea,	0.0016	"	"
"	"	choroid plexus,	0.0025	"	"

The cells of tesselated epithelium are large, and have a pale nucleus, situated either in the middle, or at the inferior extremity of the cell. The large cells are pale, and not so granular as the small ones; they have elliptical nuclei, and sometimes nucleoli. (See fig. 1, *a*.) A variety of this tesselated epithelium, is that which lines arteries, lymphatics, veins and ducts; it is smaller and more oval. Some glands are lined by an epithelium, which is round and globular, and furnished with large nuclei. (*b*.)

Fig. 1.



a. Cells of tesselated epithelium, magnified 220 diameters.

b. Round epithelial cells lining glands.

c. Cylindrical epithelium from the trachea of a child; magnified 400 diameters.

d. Old epithelial cells.

e. Free nuclei.

* Anatomie Generale. Paris, 1843.

†One Paris line is the 4-45ths of an English line.

These cells are continually undergoing a change; the old ones die and are thrown to the surface. If we examine them in this stage, we find them dark, and with their edges curled up; some become perfectly fibrated, lose all characteristics of epithelial cells, and look like amorphous masses. (Fig. 1, *d.*) In these old cells, the nuclei are indistinct; while in the young ones, we have distinct granular nuclei. Cylindrical and vibratile epithelium (*c*) are similar; they have usually large nuclei. The transitory epithelium, is a variety between cylindrical and tesselated, sometimes seen in tumors of the lip. The cells have distinct nuclei, and frequently nucleoli. As regards the epidermis proper, it is tesselated epithelium. The cells, however, are in closer union, which is probably one of the reasons why tumors of the skin are denser in their structure, than those of the lip or gums.

It consists, according to Jahn, of

Horny matter,	93 or 95	parts.
Gelatinous matter,	5	"
Fatty granules,	6.5	"
Salts and acids,	1.5	"

Concentrated sulphuric acid dissolves it; so also do the caustic alkalies. Under the epidermis we find the derm proper, or in mucous membranes, the sub-mucous tissue. Standing out from it we have papillæ, which form so large a part of many epithelial tumors. They are formed like the derma of fibro-areolar tissue; into their base run vessels and nerves. We find also a great many glands in skin and mucous membrane, but they are of no importance to us here.

If we now look at the minute structure of epithelial tumors, we shall find their first and most important constituent to be epithelial cells, chiefly of the tesselated variety. (Fig. 2, *a.*) These cells are not larger than the usual pavement epithelial cells; their size, however, is very much influenced by the density of the tumor; they are found larger in epithelial tumors, that have a cauliflower arrangement. Sometimes the cells are so closely arranged as to resemble fibrous tissue (*d*); a few drops of acetic acid, however, will render them more distinct. Sometimes again, especially in tumors of the face, we have them completely covered with granules. The cells on the surface (*b*) are dark and non-nucleated; acetic acid does not change them. The nuclei of cells in epi-

thelial tumors are usually large and more distinct than those of common epithelial cells; many cells have double nuclei, (*a*) some nucleoli, but this is only dependent on most of these cells being more developed, and it will only be found to be so in tumors that have attained a large size. I measured accurately the nuclei of some cells from the internal surface of the lip, and some from the interior of an epithelial tumor of the lip; they were:

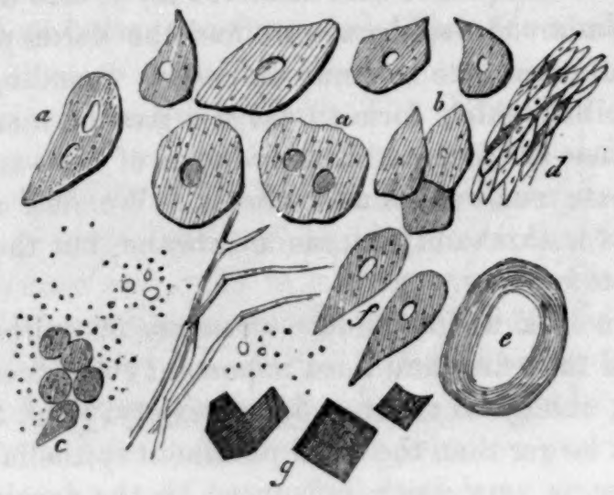
HEALTHY LIP.		TUMOR.	
Cell 1-800th of an inch,	nucleus 1-4000th	Cell 1-820th of an inch,	nucleus 1-3250th
Cell 1-1000th " "	" 1-4200th	Cell 1-1000th " "	" 1-3800th
Cell 1-2000th " "	" 1-5000th	Cell 1-1840th " "	" 1-4000th
Ceil 1-1820th " "	" 1-4800th	Cell 1-2500th " "	" 1-4400th

But in a great many small tumors, especially those of the face, there was no difference at all.

EPIDERMIS FROM FACE.		TUMOR.	
Cell 1-200th of an inch,	nucleus 1-4900th	Cell 1-1890th of an inch,	nucleus 1-4950th
Cell 1-3000th " "	" 1-5820th	Cell 1-2980th " "	" 1-5600th
Cell 1-1820th " "	" 1-4400th	Cell 1-1800th " "	" 1-4500th

Mixed up in all these tumors with the cells we find a great many free nuclei, crystals of cholesterin, pigment cells, (*g*) and

Fig. 2.



a. Epithelial cells, with double nuclei, from a tnmor of the lip; magnified 220 diameters.

b. Cells from the surface.

c. Globular cells.

d. Cells resembling fibrous tissue.

e. Fibrous cysts.

f. Fibroplastic cells.

g. Pigment cells.

blood globules. The second element we meet with, are masses of granules of all sizes. These granules, found also in cancerous tumors, have been supposed, by some of the German pathologists, to be nucleoli of larger cells. They are invariably present in epithelial tumors, especially in those of the face, where they very often constitute the largest portion of the tumor. Sometimes we find them enclosed in cysts; sometimes so united as to form the compound granular cell of Bennett. The peculiar tuberculated appearance seen in epithelial tumors of the lip, consists, microscopically almost entirely of granules.

The most interesting element we meet with, are small cells, (*c*) distinctly granulated; some of which, though comparately few, have nuclei. These cells, if acted on by acetic acid, become more distinct; their granular part darkens, and a cell wall can very easily be recognized. What they are, has not as yet been determined; they may be epidermic globules, or very young epithelial cells. Their size varies; they are, usually, about the 1-4000th of an inch in diameter. In tumors of the lip, I have seen them as large as the 1-3200th of an inch. Lebert,* perhaps, means these cells when he speaks of epidermic globes formed within a cell wall by concentric layers of epidermic cells, ("tassement concentriques des feuillets epidermiques;") if, however, he means the globes formed by cells in juxtaposition, they have never been noticed. They are usually round, and might be designated globular cells. I believe them to be, to a certain degree, characteristic of epithelial tumors, and do not recollect ever to have seen them in cancerous tumors; although they might be found in a cutaneous cancer, containing many epidermic cells. We also find fibrous tissue, entering into the composition of epithelial tumors, and forming cysts, which may be empty, or filled with granules, with epithelial cells, or with globular cells. Rokitansky and Bennett suppose these cysts to be formed, and condensed, by the pressure on epithelial cells, where they occur in great masses. These cysts are sometimes seen in tumors just forming. The cells are often held together by very delicate fibrous tissue, analogous to the intercellular substance, already noticed. Sometimes, especially in epithelial tumors of the eyelid, we find fibroplastic cells, and even fibroplastic mother cells;

*Op. cit.

a circumstance, which masks the characteristics of the tumor, and makes it, even under the microscope, a difficult matter to decide, whether it be cancerous or not.

The enlarged papillæ we meet with, are composed of closely arranged epithelial and globular cells, all so compressed as to give to these papillæ, under the microscope, a distinct outline; their real fibrous structure is thought to be preserved beneath.

If we act by chemical agents on the epithelial cells found in these tumors, they are affected in the same way as ordinary epithelial cells are. Acetic acid, whilst it does not affect the older cells, renders the young ones more distinct; especially their nucleus, which remains so until the cell wall gradually disappears. The nucleus is not affected by ammonia; but may be completely dissolved by caustic potassa. Heat and time do not change the character of the cell much. I have kept an epithelial tumor for ten or twelve days in summer without the cells being spoiled. In this respect they differ from cancer cells, which, probably, on account of their high degree of development, lose their distinctness in the space of twenty-four hours. Alcohol darkens the cell; but does not affect it otherwise. By boiling these tumors, we have a gelatinous substance left; by boiling them with liquor potassæ, we get a substance resembling mucus. Simon, who analyzed some scales from the face of a man, which, under the microscope, consisted of epidermic cells, found that on incineration, they left an ash containing carbonate and phosphate of lime and peroxide of iron; the latter was in such abundance, as to communicate a yellow color to the ash. He further states* that ash, yielded by the incineration of the ordinary thickened skin on the hands and feet, is perfectly white, but yet contains a trace of peroxide of iron.

The development of epithelial tumors is as follows: the first symptom the patient observes is a slight roughness, or sometimes a button-like excrescence. He irritates it by picking; it then assumes the shape of a wart, becomes more vascular, and grows lobular, especially in tumors of the lip. The increase is caused by layer after layer of cells forming; the old cells are driven to the top, and form the crust on the tumor. We can very often, in the first stage, see the epidermis separate from the

*P. 661. Simon's Chemistry of Man, translated by Day.

surrounding skin, and from this the papillæ springing. It is not usually accompanied with much pain; but generally with great itching, which is very annoying to the patient, not only physically, but mentally: sudden changes of weather aggravate this itching. Sometimes the tumor becomes so sensitive as to bleed when touched. After a short period it increases rapidly, its base hardens, the surface cracks, and a slow extending, superficial ulcer is established. The part immediately around the tumor hardens also, and often becomes highly inflamed, when the ulceration begins.

One of the most interesting points in connection with these tumors, is to ascertain whether, in any way, the economy is affected, as it is, generally, in cancerous tumors. The economy can only suffer from the extent of the tumor, its location, or the effect it produces upon the mind of the patient; but this affection cannot put an end to life, like real cancerous tumors, from direct morbid action, which produces the disease in another part of the body. Out of eighteen post-mortem examinations recorded by Lebert and Mayor, the disease could not in one single instance, be found in another part of the body. Of these examinations, seven were made on patients who had had epithelial tumors of the lip, two of the face, four of the arm, four of vulva, and one of back of hand. But although it cannot affect the system, we have the cells absorbed, and sent into the neighboring lymphatics. Lebert has seen this twice in the glands near the lip, and once in the arm. I have seen it occurring in a case of tumor of the lip; and it proves, that enlargement of the glands, is not entirely confined to cancerous tumors. It might be alleged, that glands are lined by epithelium, and hence, that these cells were but gland cells. But the cells lining glands are small, and cannot easily be mistaken for epithelial cells, occurring in tumors of the lip. We could also scarcely find globular cells in lymphatics. Sometimes the cells are infiltrated amongst muscular fibre, even amongst bone; but this is very rare. If infiltration into the surrounding muscles has taken place, the tumor is very apt to return, unless the part has been entirely removed.

The duration of epithelial tumors is very different. Those of the lip do not last so long as those in other parts of the body,

and ulcerate quicker, owing, perhaps, to the peculiar anatomical tissue of the lip. The patient very seldom consents to have them removed before their last stage. Out of twenty-one cases that I noted the duration of, up to the time of operation, there were:

	3–6 *months*	1 *year*	2 *years*	3 *years*	4 *years*	7–9 *years*	22 *years*
Lip,	1	1	4	2	1	1	—
Face,	3	1	1	—	1	—	—
Gums,	—	—	—	—	—	1	—
Tongue,	—	—	—	1	—	—	1
Trunk,	—	—	—	—	—	2	—
Extremities,		—	1	—	—	—	—

From this table it appears that they usually grow slowly; differing, in this respect, from real cancer, which in the skin, grows very rapidly. Very often the first wart remains stationary for a long time; one case that came under my notice, had a wart for nine years before the tumor spread. According to some, the wart in tumors of the face may remain stationary for thirty-one years. These tumors occur oftener in the male than in the female, especially those of the lower lip. Tumors of the face, however, are more frequently met with in females. I have noted:

	Men.	*Women.*	*Total.*
Epithelial tumor of the lip,	11	—	11
" " " face,	3	5	8
" " " tongue,	2	—	2
" " " gums,	—	2	2
" " " penis,	1	—	1
" " " trunk & extremities,	2	1	3
	—	—	—
	19	8	27

In regard to age, it is found to be chiefly a disease of the old.

Table of 24 Cases.

Age.	*Lip.*	*Face.*	*Tongue.*	*Trunk.*	*Extremities.*	*Penis.*
19—23	1	3	—	—	1	—
23—30	—	2	—	—	—	—
30—40	—	1	—	—	—	—
40—45	4	—	1	—	1	—
45—50	—	—	—	—	—	1
50—55	3	—	—	—	—	—
60—65	1	—	1	—	—	—
73—80	2	1	—	1	—	—
	—	—	—	—	—	—
	11	7	2	1	2	1

It is worthy of remark, that epithelial tumors seldom, if ever, are found to occur amongst negroes.

The general cause of these tumors is local irritation. Many of them result from friction, which destroys the epidermis, and causes it, in consequence, to be secreted in greater quantity. Those on the face are often caused by constant scratching; those on the lip, by the irritation of smoking short pipes, or by intense heat applied to the part. One case I saw, in a shoemaker, occurring on the abdomen, could be clearly attributed to the pressure from a small board, worn whilst working. The epithelial tumors of the scrotum, (chimney-sweep's cancer) are caused by the irritation of the soot; that they, however, may be caused by any irritant, is shown from the fact, that workmen, exposed to the fumes of arsenic, are liable to the same disease. A great many of these tumors are caused by the injudicious use of caustics. Ricord mentions, that phymosis is a predisposing cause to epithelial tumors of the penis.

As regards the diagnosis of epithelial tumors, although it may be difficult in some instances, yet, in a majority of cases, we are able to make it out, by looking at the history of the case, the general appearance of the tumor, its duration, and its manner of growth. Many of these tumors may also be diagnosticated by the microscope, by cutting off small portions, where this can be done without inconvenience, as in some tumors of the lip and penis. If ulceration has begun, a drop of the fluid on the surface, when examined, will often indicate the nature of the tumor.

The prognosis is highly interesting. From the description given, it might appear, that these tumors were entirely benign, aud not in the slightest degree liable to return. But it is not so; they will sometimes return, those on the lower lip especially, if the elements have been infiltrated into the surrounding tissue. Yet the prognosis is by far more favorable, than in cancer of the skin. Their development is so much slower, that it leaves time for active measures to be adopted, and almost all cases, if treated promptly, can be cured. The disease taken out once, may return; but if taken out a second time, will probably not. Out of all the cases I have been able to follow, not one has as yet returned. The return, when it takes place, is entirely local, and must not

be sought for in the system of the patient. The best prognosis, according to Lebert, give the epithelial tumors of the body, next those of the lips and penis, and lastly, those of the vulva, which, according to two cases, published by M. Hugier, by producing chronic inflammation of the intestines, caused death.

In the treatment of epithelial tumors, we have but one object in view,—to destroy the part. This can be done sometimes by caustics, or better still, by the knife. Caustics, if at all used, should be very active; they ought, however, never to be employed, except in cases where the part is not accessible to the knife, or where the patient is unwilling to submit to an operation. In such cases, especially in tumors of the face, the internal use of arsenic has been attended with a great deal of success. If excision be performed, we must operate in healthy tissue, and remove every thing at all connected with the diseased spot. The wound usually heals well, and by first intention. It is well in tumors of the lip, to let the patient use glycerin for some time after the operation, to prevent irritation, and to keep the part moist.

A very singular, but unsuccessful mode* of treating tumors of the lip, has recently been tried by Jobert; he tied the artery, vein, and nerve, leading to the part affected, but soon found that it diminished the tumor, without curing it. If the part removed be very extensive, we have to perform a plastic operation, to fill up the gap. In some cases in the extremities, where the patient is rapidly sinking from hectic fever, or loss of blood, amputation is the only resource. To be enabled the better to trace the difference existing between epithelial tumors and cancer of the skin, we will briefly consider the nature of the latter.

Cancer of the Skin.

As before stated, not more than 1-6th of the tumors of the skin called cutaneous cancerous tumors, are really cancers. Out of 40 cutaneous tumors, I have only seen 9 cancers; a proportion even larger than usually met with. They were:

Cancer of the lip,	- - - - - - - -	4 cases.
" " face,	- - - - - - - -	2 "
" " penis,	- - - - - - - -	1 "
" " gums,	- - - - - - - -	2 "
		Total, 9

*Noticed in Albers's Jahresbericht for 1850.

The skin on the lip and organs of generation is most frequently attacked. According to all modern writers, we find in the skin all the different varieties of cancer. Bock says, he has most frequently met with scirrhus; whilst the usual opinion is, that it is a mixture of encephaloid and scirrhus. Melanotic cancer is very rare. Bennett in his book on Morbid Growths, observation XL., page 91, reports a case of melanotic cancer affecting the skin. The general appearance of cancerous tumors of the skin, is not very marked, from that of epithelial or epidermic tumors. They, however, rarely attain the size of these; never assume the cauliflower arrangement; ulcerate sooner, with a great deal of pain; and develope their peculiar action, at the same time, or shortly afterwards, in a different part of the body. Velpeau mentions a case, where in an autopsy made on a man who died after an operation for the removal of a cancer of the lip, a cancer was found to exist in the liver. Often in cancers of the lip, we have the sub-maxillary gland becoming cancerous.

As regards the microscopical elements of cancerous tumors of the skin, we find cancer cells, free nuclei, fibrous tissue, epithelial-cells and granules. The cancer-cells are of ordinary size; some have double nuclei, some nucleoli. The nuclei themselves are very large and distinct, measuring about the 1-5000th part of an inch. In several instances I found mother-cells. The crust on the surface of the tumor is composed of cancer-cells and epithelial cells, mixed up with blood globules; sometimes the cancer-cells are so mixed with the epithelial-cells, that these latter appear, as if their nuclei were cancer-cells. The fibres in the middle of the tumor, uniting the cells, are usually very strong and dense, much stronger than the fibres in epithelial tumors. The cysts they form are very much of the same kind as those met with in scirrhus of the breast; they are sometimes empty, sometimes filled with cancerous matter. Cancerous tumors of the skin, like epithelial, begin as a small wart, but are usually harder, and of faster growth. They also ulcerate sooner, causing the neighboring lymphatics to swell. Sometimes there are several small separated tumors, each of which is distinctly prominent, and which give to the whole diseased mass, a peculiar lobulated appearance. The ulceration, if it once begin, goes on very rapidly; the ulcer, however, begins from the derma proper, and

not, as in epithelial tumors, from the surface; it is also much deeper. According to most observers, cancer of the nose and penis have the most superficial ulceration. If the disease be cut out, it will very often return speedily, sometimes within the lapse of a few months; and the patient either sinks from the return of the cancer in the same spot, or from its affecting some other organ. Lebert gives a very accurate table of 12 cases, in which he was able to trace the period between the first operation and the return of the tumor:

3	Cases lasted from	- - - - -	3 to 6 months.
3	"	" - - - - -	6 to 9 "
3	"	" - - - - -	9 to 12 "
1	"	" - - - - -	12 to 15 "
1	"	" - - - - -	15 to 18 "
1	"	" - - - - -	18 to 24 "
12			

The average duration of the disease before it terminates fatally, is about two years. In two cases I was able to follow, one died after eleven, the other after fifteen months. Broca mentions a case, which, although operated on five times, terminated fatally in six months. In regard to sex, it seems, that on the whole, men are more liable to be attacked than women. Out of the cases I have noted, there were seven men and two women. The age most liable is the same as in epithelial tumors; it is chiefly from 45 to 75 years. From this it will appear, that the prognosis is the same as that of cancer generally. The treatment usually preferred is to operate, with the hope of the disease not returning speedily, rather than to let the patient have the horrible suffering, of an open ulcerating cancer. If the glands be much involved, it seems to be the best practice not to operate. The patient must be supported by tonics, and by proper exercise and diet.

The great difference then existing, as we have seen, between epithelial or epidermic, and cancerous tumorsof the skin, is:

That one is a local disease.	The other constitutional.
One grows slowly.	Grows rapidly.
Ulcerates superficially.	Ulcerates deeply.

May return; but only as a local affection.	Always returns; sometimes in another spot.
Accompanied with little pain.	Always attended with a great deal of pain,
Microscopically shows healthy tissue.	Microscopically shows cancer-cells.
Prognosis usually favorable.	Prognosis very grave.
Local treatment cures it.	Local treatment only palliates it.

[To be followed by a report of Cases.]

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Extra Meeting, March 9th, 1852.

DISCUSSION ON ANÆSTHESIA.

(Reported for the Medical Examiner.)

Dr. Condie, in opening the discussion, said: It would have been better, perhaps, had some one who is an advocate for the employment of Anæsthetics under all the circumstances in which they have been recommended, to have opened the discussion this evening, but as I have been requested to commence, I feel no hesitation in announcing myself as one entirely opposed to their employment when this is done for no other object than merely to prevent or assuage pain.

Pain I admit to be an evil, often of very considerable magnitude, to relieve which is unquestionably the duty of the physician, in every instance in which it can be done without endangering the patient's life, or incurring the risk of augmenting the violence and duration of any disease under which the patient may at the time labor. But to prevent or soothe pain is not certainly the leading object of the physician's office—on the contrary, his chief aim should be to protect the organism from every lesion by which its functions may be impaired, or its life destroyed. To do this he is often warranted in inflicting pain, but he has no right to jeopard the integrity or life of the organism, merely for the sake of relieving or preventing temporary suffering. The propriety of the employment of anæsthetics for no other object than to produce insensibility to pain, must be based upon their entire and invariable safety. The advocates of these agents maintain that when they are used with proper precaution, and their effects are care-

fully watched, they are perfectly safe. The rules, however, for their safe employment have never been given with any degree of clearness and precision.

Whether all the cases have been made public, in which the induction of insensibility by means of the recently introduced anæsthetic agents has been productive of injurious or fatal results; cannot be ascertained, but a sufficient number are upon record to prove that these agents are not as invariably safe, as was at first supposed. It is now admitted by some of the advocates for their employment, that we cannot always predict the effects that may result from their administration—that we are not, as yet, able to determine, before hand, the existence of those constitutions or peculiar states of the system in which the production of anæsthesia is liable to prove injurious. Now upon this are based my objections to the use of anæsthetics, when given merely to induce insensibility to pain. In surgical operations, and during parturition, it is not maintained, by any one, so far as I am aware, that the induction of anæsthesia increases in either case the safety of the patient—it is admitted, I believe on all hands, that the only benefit that results is simply relief from pain. This is unquestionably, in most instances, a boon not to be refused to our patient when it can be safely granted; but I cannot admit the right of the surgeon or obstetrician to resort to an anæsthetic to prevent the pain of an operation, or that of parturition, in any instance, until he shall be able to say, positively, that no injury will be liable to result from its employment. I can conceive of cases where it would be injudicious to cause insensibility to pain, even though it might be done without the slightest risk—cases where the sufferings of the patient afford important indications to the surgeon or accoucheur, upon the absence of which indications he is led into errors that may eventuate in much suffering, or even the loss of life.

It has been asked whether, if we could be put in possession of the statistics of the deaths from opium, the destruction of life resulting from its use would not far exceed that which has been caused by any of the modern anæsthetic agents, and whether with this fact staring him in the face, the practitioner would be warranted in abstaining from its use as a remedial agent in the cases which call for its administration. It cannot he denied that

much mischief—a great destruction of life, even, has been occasioned by the *careless* and *improper* employment of opium, in common with every other active article upon the lists of the materia medica, and I for one, certainly do not admit that, on this account, its use as a therapeutic agent is to be denounced. But is any practitioner prepared to defend the administration of opium for the production of anæsthesia in surgical operations and during parturition? If so, then I admit that the argument in favor of the use of anæsthetics in surgery and obstetrics, drawn from the occasional injurious effects of opium, has some force; but not otherwise.

For the purpose of arresting disease, of guarding the organs of his patient from dangerous lesions, and thus saving him from death, from protracted suffering, or from decrepitude, it is the duty of the physician to make use of every therapeutic means which experience has shown to be generally beneficial in similar cases—nay, where the disease is violent and the danger of a fatal result imminent, he is warranted in the resort to remedies, which, from their well-known properties, would appear to be adapted to fulfil promptly the well marked indications in the case under treatment, even though we are aware that the use of those remedies is attended with danger—that in place of a curative, they may possibly produce a destructive influence. But in cases that he has every reason to believe will terminate favorably without the administration of any doubtful or dangerous remedy, is there any propriety in the practitioner resorting to one of this character, merely to relieve some prominent and distressing symptom? I should certainly say there is not. I know not what others would feel, if by a remedy given merely to cause insensibility to pain, in any case of which pain is known not to enhance the danger, the death of the patient were to be produced; but I trust that, with me, every conscientious physician would acknowledge that the plea of a humane intention to save his patient from suffering, is not a sufficient excuse for the fatal effects of his indiscretion.

As therapeutic means, the modern anæsthetic agents, even when administered by inhalation, may prove advantageous, I have no doubt, in many violent and dangerous diseases. Their topical application to external parts, when these are the seat of severe

neuralgic pains, has been shown, in a large number of instances, to give prompt and effectual relief.

Some of the advocates for the use of anæsthetics in surgery and obstetrics, admit that danger may result from the inhalation of chloroform, but insist that such is not the case when pure sulphuric ether is inhaled—in no instance, they assert, has the slightest injury resulted, when this latter has been employed for the production of insensibility to pain. This sweeping assertion is, I confess, a startling one, when we reflect upon the immense number of cases in which the sulphuric ether is reported to have been employed, and the careless manner in which it must at first have been administered, and then consider the powerful impression it exerts upon the brain and nervous system when inhaled, as it has so often been, to a sufficient extent to induce complete anæsthesia. I admit, at the same time, that, if there has been no keeping back of the fatal cases—there is scarcely any thing upon record to disprove the innocuous character that has been ascribed to sulphuric ether as an anæsthetic.

It has been recently reported, but I will not vouch for the accuracy of the statement, that although the production of insensibility by the inhalation of anæsthetic agents may not produce immediately any injurious results, that the impression made by these agents upon the brain has subsequently resulted in a derangement or impairment of the intellectual faculties. I can easily conceive that this might result from their frequent use, at short intervals, but have my doubts as to its having ever occurred from a single employment of them, excepting, perhaps, it may have been in a case, where the brain was already strongly predisposed to disease or functional disturbance, and then, we should presume that the result would be immediate or nearly so.

Dr. Turnbull, though opposed to the indiscriminate use of anæsthetic medicines, expressed himself as greatly in favor of sulphuric ether. He considers it the safest and most reliable of this class of agents, and stated that he had been able to find but one case recorded of death caused by its use. This is narrated in the number of Ranking's Abstract, for June 1848, p. 191, and is as follows:—

"On the 10th of July, a man æt. 55, of robust constitution, was etherised for the removal of a tumor; after inhaling two or three

minutes, considerable agitation was observed in the face and limbs; during five minutes more the inhalation was continued, and complete insensibility induced. The first incision was performed, when the dark color of the patient's countenance attracted the operator's attention, and the man almost immediately expired. On dissection, the viscera exhaled a powerful odor of ether, the blood was viscid, and the lungs were deeply congested." —*Journ. des Connais. Med.-Chirurg.*

Three other cases are recorded; an investigation of which, however, will show that death was erroneously attributed to the ether employed.

The number of deaths from chloroform, amounted to 18; a difference very disparaging to the latter.

The mischief, in most of the fatal cases recorded, he was firmly convinced, resulted not so much from the article per se, as the abuse, or incautious use of it.

Now ether and chloroform are generally administered by means of a handkerchief, and consequently, as the medicine is impermeable to the atmosphere, there is not a due admixture of oxygen with the ethereal vapor; hence, the oxygenation of the blood is impeded and dangerous, and occasionally, as we have seen, fatal results ensue.

In administering ether, we endeavor to bring the system rapidly under its influence, by applying to the mouth of the patient a sponge well charged with the anæsthetic. In the use of chloroform, more caution is required; fifteen drops should be exhibited and repeated every minute or two, until the desired effect is obtained.

Dr. T. regarded the use of anæsthetic agents as invaluable in many diseases, in which pain is a prominent and distressing symptom; as in colic, asthma, neuralgia, &c.

Dr. Parrish remarked, that in the absence of so many of the advocates of anæsthetic agents, he felt called upon to say something in their favor, in reply to the remarks of the former speaker.

It so happened, said Dr. P., that on the first announcement of the discovery of the power of ether to destroy pain, I was one of those who received the intelligence with gladness. It came to us in the autumn of 1846, on the authority of Drs. Warren

and Hayward, two of the oldest and most eminent Surgeons of New England, attested by their colleagues, at the Massachusetts General Hospital, and by other reliable witnesses of its effects. The evidence was too strong to be resisted, and I distinctly remember the effect which the reading of Dr. Bigelow's first paper on the subject produced on my mind. It sent a thrill of delight and gratitude through my frame as I read that an agent had really been discovered, which had the power of promptly and effectually destroying the sense of pain, even under the most severe inflictions of the knife.

For, whatever may be said here of theuses of pain, and however lightly we may esteem its dangers, it is still a dreaded evil. Before it the stoutest heart quails, the strongest man becomes helpless as a child, and the bravest man reveals that he is as weak and frail as the rest of mortals. Under its severe attacks all alike succumb and cry out for relief. But, besides the mere interruption to ease and comfort induced by pain, it is often a positive evil, and may even prove a cause of death.

It aggravates disease by disturbing the balance of the nervous system, and preventing that repose so necessary to the recuperative process, while, if it be intense and long continued, it may exhaust the nervous power, and extinguish life itself.

Whatever tends, therefore, to annul pain is not a mere luxury, but a positive remedial agent of great power and utility. Hence, I cannot but regard the discovery of ether as a great boon conferred upon mankind, and although not naturally as ardent and sanguine in my temperament as some of my friends, I was not yet cold enough to receive the tidings of its introduction with calmness or indifference.

I confess, however, that a shade came over the brightness of the first view, when I reflected that an agent possessing such remarkable powers, might, on more extensive trials, prove so eminently dangerous to life as to preclude its employment. I fancied some poor patient stretched on the operating table about to be subjected to a safe and simple operation, suddenly overpowered by its use beyond the point of recovery; and the image of a scene so frightful rose up before me as a thick cloud on the sky of hope.

I became from the first an anxious, and I trust, an unpreju-

diced inquirer into the merits of this discovery; and holding, at that time, the position of Reporter on the improvements in Surgery, for the College of Physicians, I made the subject of anæsthetic agents a special topic of investigation. After the lapse of a year, the evidence, pro and con, was carefully sifted—the medical journals of this country and of Europe were critically examined, and notwithstanding many of these had at first taken strong ground against ether, and were by no means backward in publishing anything which was deemed unfavorable to it, an overwhelming mass of testimony to its utility and safety was collected. I found that, although the article had been used in thousands of cases, from the simple operation of extracting a tooth, to the most extensive and dangerous operations in Surgery; although its employment had been almost indiscriminate, and in many instances it had been recklessly given by non-professional persons—that but eight or ten cases of death had been attributed even by its opponents to its use—and that not one of these occurred under its immediate effects, the event generally occurring days, and even weeks afterwards, and under circumstances which rendered it very questionable whether the ether had any agency in the result. Since that time, which was in the year 1847, I have been an attentive observer of the progress of this matter. I have examined carefully for fatal results, and have not yet found a case reported in which death could be fairly and unequivocally attributed to the action of ether.

The case mentioned by Dr. Turnbull this evening, may be one of that character, and similar ones may have been reported, but if so, they have escaped my observation.

As it relates to chloroform, their can be no doubt that eighteen deaths have occurred after the use of this article in surgical operations, and some of them under circumstances where all needful caution was observed in its administration. These may have been owing to some idiosyncrasy in the individuals submitted to its action, or to a peculiar mental or nervous condition existing at the time. Fright from the apprehension of an impending operation, or faintness from mental inquietude, while the patient was sitting upright, in connection with the strong and sudden sedative influence of the chloroform, may have extinguished the vital spark in some of these cases. But whatever the cause, they

stand against the reputation of chloroform as a safe article, although they are not, I think sufficient, indiscriminately to condemn it.

It is worthy of remark, that all the fatal cases from chloroform have occurred in surgical practice; and so far as I have examimed into them they have generally been before the infliction of pain. When given in cases of labor, where the pains are violent, and for the purpose of counteracting them, it seems to be more safe; and I am not aware of any deaths being reported by obstetric physicians, although it has been extensively employed in their department.

The objection made here to anæsthetics, on the ground of the dangers to be apprehended from their *injudicious* employment, will lie against all the most potent and useful articles of the Materia Medica. Shall morphia be condemned because by the mistake of a physician or apothecary, a solution of a drachm to an ounce of water in a teaspoonful dose will kill, in a case where a grain to the ounce was intended? Shall laudanum be set aside, because it is taken in large doses for the purpose of self-destruction? Shall wine and brandy be stricken from our list of remedies, because thousands are annually swept into their graves from their habitual use? The holding up of this argument by the opponents of anæsthetic agents, shows the shifts to which they must resort to support their position, for they are possessed of too much intelligence and good sense to use it under any other circumstances. Considering the great power of these agents, and the rapidity with which they act, it is indeed remarkable that so few fatal cases have occurred. Let it be remembered that ether has now been in use for over five years, and chloroform for over four years, and that they have been extensively employed in all parts of the civilized world; that every large Hospital in Europe and America, except our own Pennsylvania Hospital in Philadelphia, uses one or the other of them habitually before great operations; that private practitioners employ them daily in surgical and obstetric practice, and yet with all this vast experience of their use, their most determined opponents can with difficulty make out a single case of death directly traceable to ether, and but eighteen attributable in any way to chloroform; and I say that no article in the Materia Medica is established

upon a firmer basis. It is in vain to interpose theoretical objections, or imagined fears, against such an array of facts; and because a man may have once committed himself by a hasty opinion, it is useless to continue the opposition against such evidence.

As it relates to my personal experience of the use of anæsthetics, I may remark, that as to chloroform I have rarely used it, regarding ether as equally effectual and much more safe; and while that is attainable it is unnecessary to resort to the other.

If ether was not at hand, and the case was urgent, I should not hesitate however to employ chloroform, with that caution which the power of the article renders it necessary to observe. I have many times administered ether, and although for several years past my attention has been mainly devoted to general practice, almost to the exclusion of obstetrics, and of large operations in surgery, yet I have often been associated with others in the management of important surgical cases, and have had frequent opportunities of observing the effect of ether in preventing the pain of operations. Quite recently, Dr. Pancoast and myself were consulted by a lady from New Jersey with a large tumor on the side of the neck, involving a lobe of the parotid gland, which we deemed it proper to extirpate. The operation was skilfully performed by Dr. Pancoast while the patient was under the influence of ether. In this case the article acted most happily. The patient sat upright in a chair during the operation, with her head leaning on my shoulder; she was sufficiently conscious to reply to questions, while the feeling of pain was completely annulled. After the Dr. had dissected off the skin from the tumor and was dragging it from its bed, in order more completely to detach it from the surrounding parts, the patient apparently lying in a tranquil slumber, I inquired of her how she felt? when she replied in the tone of a person overcome with drowsiness, "very comfortable!" After the completion of the operation, she stated that the last thing she remembered was the sensation of the knife cutting through the skin, as though a line were being drawn over it by a dull instrument; and when the tumor was shown to her, she could scarcely believe that it had been removed. There was in this case no moaning, or stertorous breathing, or restlessness while under the influence of the ether, and she came out of it cheerful and self-possessed. Union by the first intention took place in the wound, and she had a rapid convalescence.

I have been concerned with Dr. Pancoast still more recently, in two cases of cancerous mammæ, in which, after presenting to the patients and their friends the doubts hanging over the result of an operation, they have decided to submit to it, if they could take ether.

In both cases the glands of the axilla were involved, and it was necessary to prolong the incision into the axilla, and to pick out the glands with the fingers. This was done without the patients being conscious of it, although in both of them there was some degree of restlessness and apparent distress during the operation. One lady experienced under the ether a pleasurable excitement, and awoke while the dressings were being applied, in an excellent humor, and with that tendency to loquacity which is often observed after the use of alcoholic stimuli. It would be easy to multiply cases of this description, but I will not detain the Society longer. I may say, however, that I have used ether to a considerable extent as a therapeutic agent, in nervous diseases, and in some cases where there was an intolerance of the preparations of opium, and yet where it was very desirable to induce sleep. Such are cases of nervous or sick headache, of neuralgia, various spasmodic affections, &c. In these cases I have seen the inhalation of small quantities of ether given at short intervals, and not carried far enough to induce complete insensibility, produce the most happy effects. About a tablespoonful poured upon a sponge, previously moistened with hot water, and taken in the hands of the patient, will often tranquillize the system, and favor repose, where anodynes fail, or produce but a partial effect; nor have I ever seen any unpleasant effect produced by this mode of administration. I am glad that my friend Dr. Condie does not carry his objections to the use of anæsthetics so far as to condemn them altogether in the treatment of disease, and that he is willing to admit that they may prove advantageous in many violent cases; though I cannot see how with these views he can be so decidedly against them in surgical operations and in the practice of obstetrics.

I know of no subject which can more properly claim the attention of the Society than this; and it is to be hoped that the members will express their views freely upon it.

We in Philadelphia are, I fear, regarded by our brethren in

other parts, as too indifferent to the value of this discovery, and from the fact of some of our leading men taking strong ground against it at the start, many may have been disposed to shut their eyes to the true position of the case, and have not given to it a free and unprejudiced inquiry.

I trust, however, that though slow and cautious in forming an opinion, the profession in Philadelphia will be found right on this question, and that no one will allow his preconceived views to stand in the way of its fair and candid examination.

Dr. Darrach, said: That upon all new medical topics, diversity of opinion may be very properly and necessarily expected to exist; some will entertain views in favor and others in opposition; nevertheless, in the midst and by means of it, the profession is quietly and slowly forming its axiom.

In respect to anæsthetic agents, as two views, strongly in contrast with each other, have been eloquently presented, it may not be without interest to give the subject a triangular form, by presenting a third view.

The agencies in question, more especially chloroform, are dangerous. Chloroform has destroyed life, and that in a most unexpected, sudden, and shocking manner, and had it been discovered in the more depraved ages of the world, it would doubtless have subserved tragical designs. And, although we now have no such fears, yet independently of the sad effects of presumptuous ignorance, there is still danger from its use; and that when under the ordinary watchfulness of the physician. In an obstetrical case, for example, chloroform was administered with ordinary prudence, or rather say, within the limits of *ordinary imprudence*, and the patient became quickly insensible, unconcious, pulseless and cool, and all this continued long enough to agonize the attending physician with the fear of horrid and fatal consequences—his tormenting imagination quickly depicting the lifeless body of a woman in labor, and the consequent grief, inquest and trial.

Nevertheles, anæsthetics, as the nullifiers of pain, mark a new epoch in medicine—a blessing. The dentist, surgeon, obstetrician, and the general practitioner, are all called upon to use it. It removes the sting of disease, operations, and the cursed

pain of child-birth. Man's punishment is to obtain his food by the sweat of his brow—hard labor! and woman's to have pains in child-birth. But the law is satisfied, and now, since man is blessed through christianity with *labor* saving machinery, that he may no longer toil, woman in child-birth must not judicially and cruelly be denied chloroform, her pain-saving boon in labor.

Hear the testimony of a lady on this point. "I inhaled the chloroform by applying the mouth of the phial to one nostril, whilst for safety I breathed the atmosphere with the other; and without disturbing consciousness or pulse, the tremor, physical and mental, from fear of the approaching labor, which agitated my whole frame, gave place to a most delightful soothing; the subsequent grasping pains were subdued, and the ordinarily severe forcing pains at the close were rendered altogether tolerable. I now, she adds, look back with gratitude at the whole course of the labor as divested of its accustomed dread and pain."

In view of such testimony it becomes an important question, whether the physician, whose proper position is that of a servant to remove not only disease but suffering, is at liberty to withhold that, which is not the property of the physician, but the boon for suffering humanity—a gift of christianity—especially so to woman in her agony.

These pain-saving agents have also enlarged the domain of surgery, greatly diminished the mortality of its operations, and are making it more popular and applicable. Operations are by them rendered practicable, which otherwise could not be so from their duration, frightful character and extreme and protracted painfulness. They prevent the *deadly shock* from acute and protracted pain which the surgeon otherwise inflicts; how many from the *shock* of the operation have died! By the formation of the sentiment that the capital operations are painless, they will make the *early* resort to them more customary. Here is a most invaluable benefit. The surgeon is no longer the butcher-knife-man! His sternness gives place to benignity, and his relieved patient awakes to the joy that without suffering he is restored to health. As the office pupil of the late Dr. Physick, and subsequently for years an observer of European surgery, especially that by Dupuytren at the Hotel Dieu, it is my painful testimony that capital operations, without anæsthetic agents, have heavy

mortality; the surgeon, like the soldier, may boast of his nerve and firmness, but he must weep over the slain. How true is this in regard to the mortality from lithotomy. The cause is evident; none, not even the most intelligent, far less the uneducated, have submitted to this fearful and hazardous operation—a choice between inevitable and possible death—until the bladder and contiguous parts have become congested, irritated and disorganized by innumerable fits of stone, the calculus augmented in size, and mortification from the operation hazarded. But now by chloroform and early application, this dreadful operation has become painless and successful.

In respect to dentistry, the extraction of not only a tooth, but of many teeth at a sitting, has become painless and safe.

As to its modus operandi, Dr. Simpson and others have considered it that of asphyxia, a state of direct and immediate pulselessness. But a minute observation of its phenomena will distinguish them from those of all the recognized forms of asphyxia. These relate directly rather to blood; those in question to nerve; and may therefore be better explained by the Hall doctrine of the nervous arc.

The animal surfaces more especially the dermel and mucous, are esodic nervous surfaces. They have the spreading terminals of the esodic nerve of sensation. These terminals being directly impressed by chloroform, their function is suspended without otherwise affecting the constitution. Continue the application, and the sensorium becomes affected, and thereby consciousness is suspended; still further continue the application, and the heart's action is arrested. Thus we may properly deduce three stages in the action of chloroform; 1st, loss of sensation of the esodic surface, partial or general; 2d, loss of sensation, and consciousness; 3d, loss of sensation, consciousness, and pulsation, which last being continued becomes death.

The first of these stages is entirely safe; the second may also be considered without positive danger; but the third is fearfully hazardous. These stages may well be represented by the three breakers on the sea shore; to bathe in the first is safe, in the second approaches the verge of danger, and in the third is to be the undertow and death.

The intelligent dentist may then safely use chloroform if he *limits* its effect to the said primary stage, beyond which he

need not extend it. A lady urgent for its benefit in the extraction of some teeth, breathed the chloroform a few seconds without the least affecting consciousness. After which the gums were immediately cut, she then declared that she felt the instrument moving about the crown of the teeth, but that it produced no pain. Again, in like manner, the agent was administered, and then three large teeth were successively extracted. She testified that she felt all the manipulations, but that they were each and all of them painless.

Dr. Emerson observed that in regard to the agencies by which unconsciousness to pain was induced, there were some phenomena connected with the nervous system and its mysterious functions, which he thought had not been generally recognized, or if noticed, not regarded with the attention which they deserved. He referred to the power of suspending sensibility exhibited by many persons subjected to pain.

The mesmerists, he said, claimed this power as one of the results of their manipulations, and many cases are related where cancerous breasts have been cut out, and other most formidable operations performed on patients previously mesmerized, who declared they were free from pain whilst under the hand of the Surgeon. He would not dispute the facts in such cases, further than to deny the necessity of any such fallacious agent as animal magnetism to induce the condition. The power evoked, through mesmerism, was doubtless exerted by the minds of very impressible subjects. He had often observed that certain persons seemed endowed with a capacity, on some occasions, to throw the ordinary functions of the nervous system "out of gear," to use a familiar term of machinists. Dr. Emerson related a few cases illustrating the subject. In one of these, he was assisting the late Dr. Physick in removing a tumor from the face of a young man who fainted. During the period of syncope, Dr. Physick observed how differently persons bore pain. Whilst once performing an operation of an unusually painful nature upon a man, and wondering at his not crying out with agony, he was surprised at hearing him calmly observe, "Dr. Physick, how very keen your knives are. It is really a pleasure to be cut with them."

The second case occurred under Dr. E.'s own observation, in

the person of a near relative, a young lady, who, whilst very young, would never suffer any thing to be done to her teeth. All kinds of entreaties and bribes were exhausted upon her, and the result was, that her teeth, being too much crowded, began to interfere with her pretty looks. As soon as she attained an age when these became more fully appreciated, she cheerfully consented to visit a dentist, who found it necessary to extract no less than five teeth, all strongly rooted. Being her attendant, he was extremely surprised by such an exhibition of fortitude in one whom he knew to be endowed with exquisite sensibilities; and asking her immediately after the operation, if she had not suffered intensely? was still more surprised to hear her say, that the only pain she had experienced was from the apprehension of the suffering he might have on her account. If mesmeric processes had been resorted to, this of course would have been considered a conclusive demonstration of their efficac y.

Dr. Emerson observed, that this boon, for such hethought this natural resource might appropriately be called, was most frequently possessed by persons endowed with exquisite sensibility, against the effects of which it might be regarded as a protection. Where the suspension of feeling was induced by mesmeric manipulation, he considered the phenomenon as altogether the result of that extraordinary power which the mind, when deeply impressed by a sense of mystery, or some other obscure agency, could exert over the nervous system, and both with such agencies and phenomena, it would be well for the profession to become better acquainted.

Dr. Evans inquired of Dr. Parrish whether in the course of his investigation into the effects of the inhalation of ether or chloroform, he had met with or heard of any case of deranged mental manifestations resulting therefrom? He had been informed of three cases said to have been produced by etherization, but had had no opportunity of verifying the statement, and he would feel much indebted to any of his professional brethren who had seen such effect resulting from the use of either of the anæsthetic agents, who would communicate it to him, or allow him the opportunity of observing it.

In regard to what had just been said by Dr. Emerson in rela-

tion to some peculiar power in the human system to suppress the feeling of pain, he thought that whenever insensibility to pain, under causes usually producing it, existed, it must be the result of disease in the nerves or centre of sensation; and he had repeatedly witnessed cases of this kind. In two instances of men deprived of the use of their reason, who had come under his notice, the sense of feeling was so completely destroyed, that they respectively stood near enough to a hot stove to burn the glutei muscle so deeply that large sloughs came out, and yet were not aware of it at the time. They appeared otherwise to enjoy good health. And at the present time he had a lady under his care, who, in the early stages of her disease, which appeared to be spinal, was so completely deprived of feeling that a pin could be thrust into her flesh almost anywhere, without her being conscious of it. It was upon this sensitive portion of the nervous mass that the anæsthetic agents acted. From theorising on the action of these agents he had been decidedly opposed to their use; but having been invited by Dr. Horner to be present at his operations before the class at the University, in 1850–51, he had seen them used there very freely, and with the happiest results, so that he had been induced to alter his opinion, and he considered their employment justifiable, where extensive operations, usually giving rise to great pain, were to be performed.

Dr. Wiltbank said, that as he had been among the objectors to the use of anæsthetics in midwifery, he felt it incumbent on him to make a few remarks. Until within the last year he had opposed these agents on theoretic grounds. He feared that they would subject the parturient female to danger from lacerations, hemorrhages, convulsions, fevers, and many other evils. He had argued himself into the belief that they must, almost necessarily, injure both mother and child. The accumulating testimony in their favor, however, and the urgent solicitations of his patients, induced him to give them a cautious trial; and he must say that his opinions had undergone a very material change. He found that he had exaggerated the objections and undervalued the advantages to be derived from them; but he could not endorse the opinions of those who advocated their employment in all, or even a majority of labors. Like every other article in the Materia Medica,

anæsthetic agents should be restricted to the proper cases. Their *great* use, he thinks, is to allay excessive, irregular and inefficient pains, to promote sleep and to prevent exhaustion. To illustrate his meaning, he cited two interesting cases. The first was that of a lady he saw in consultation, who had been in active labor sixty hours. The membranes were ruptured, the head large and firmly ossified was immovably fixed in the superior strait, and although the pains were frequent and severe, no advance was made. Her general system was dangerously suffering from the long continuance of the pains and the loss of sleep. Ether here acted like a charm. It allayed pain, secured sleep, and refreshed and invigorated the patient. The use of the anæsthetic agent was kept up, with occasional intermissions, for thirty-six hours, and he thinks that without it, her life must have been inevitably lost; she recovered well. A second case, still more strikingly illustrative of the benefits of anæsthetics, properly applied, fell under his notice. This was a lady, who, when near the close of gestation, being exposed to cold in attending upon a sick child, was seized with severe and continuous pains. The whole abdomen was hard, the body of the womb firmly contracted, and the pains violent and without any distinct intermission. The os uteri, however, was unaffected, and there were no signs of labor. She was bled, and took opiates and antispasmodics in large and repeated doses without any relief. The pains increased until the patient was almost frantic with suffering, and still there were no signs of labor. Chloroform was given with delightful effect. The pains were instantly arrested, the irregular contractions were subdued, and the patient slept sweetly. In fifteen minutes she awoke with slight bearing pain; the os was now found to be dilating, and in one hour and a half the delivery was safely and easily accomplished.

BIBLIOGRAPHICAL NOTICES.

Illustrated Manual of Operative Surgery and Surgical Anatomy, By MM. Cl. Bernard and Ch. Huette; *edited with notes and additions, and adapted to the use of the American Medical Student*, by W. H. Van Buren, M. D., Surgeon to Bellevue Hospital, &c., and C. E. Isaacs, M. D., Demonstrator of Anatomy College of Physicians and Surgeons, New York. *Illustrated with steel engravings from drawings after nature*, by M. J. Léveillé, *designed to serve as a companion to the ordinary text books of Surgery*. New York, H. Bailliére, 290 Broadway, 1852. Part I., pp. 84, and 26 plates with 130 figures.

The rather lengthy title here presented will afford our readers a good idea of the very handsome book which is thus offered to their notice. We need say nothing in commendation of the French original. Its reputation as a convenient and beautiful elementary atlas of operative surgery, has long been established; and many of the plates have recently become still more widely known, through the excellent American copies of them in the published parts of the operative surgery of Dr. H. H. Smith. The translators are men of tried ability and fitness for their undertaking, and we doubt not will acquit themselves in the very best manner of the task before them. This they appear to have done fully in the part now issued; but we hope to be able to speak more at large and decidedly in this connexion, after the remainder of the volume has arrived. In the mean time it may be well to note a few matters of interest in regard to the character and contents of the part before us, as well as to the views and intentions of the American editors, according to the language of their preface.

These gentlemen "flatter themselves that they have contributed to the supply of a want which has not been unfrequently experienced heretofore, viz: a complete and concise picture of the science and art of operative surgery, in its present advanced and perfected condition, in a portable form. The admirable and extensive works of Bourgery and Jacob, and Velpeau with the

translation of the latter under the auspices of Prof. Mott, and the equally excellent treatise on operative surgery by Prof. Pancoast of Philadelphia, can never be replaced by the present work. Yet its compactness and portability will render it more desirable to the student as a companion in the lecture and dissecting room, where its copious and graphic illustrations will assist him materially in acquiring correct general ideas as to the nature and objects of the individual operations of surgery; whilst for more minute and varied details with regard to their history and numerous modifications, the less accessible and more expensive treatises alluded to, can be consulted at a more advanced period of study. In fact, they are better calculated for works of reference to the practitioner of surgery, than as text books for the student, designed to set forth concisely the elements of the art. Our manual, whilst it is intended mainly to illustrate the intricacies of operative surgery, by appealing to the eye as well as to the understanding of the student, and by familiarizing him with that most useful department of anatomy which relates to surgical operations, will also be found, it is hoped, not entirely useless as a work of reference to those already engaged in practice."

We are glad to learn further, that in the fulfilment of their plan the translators have especially endeavored "to Americanize the language of the work to as great an extent as possible, making use of the terms in ordinary use in this country by teachers of anatomy and surgery, in order that the American student may not be annoyed by meeting with foreign modes of expression with which he is not familiar, and which, in their opinion, it is rarely desirable to introduce into common use."

The first six plates are devoted to the representation in some forty-eight figures of the "Instruments employed in Surgical operations." These, as a matter of course, are all French, and after the patterns of Charriére. Among them we have, 1st, instruments required for making incisions; 2d, those required for ligature of arteries: 3d and 4th, those required for amputations; 5th and 6th, for exsection of bones. Next in order come the operations themselves; and here again we have six preliminary plates occupied, this time, with various minor or elementary manipulations, such as incisions, union of wounds, the employment of the seton, vaccination, scarifications, acupunc-

ture, the anatomical and operative surgery of bleeding in different parts, including arteriotomy; and lastly, the ligature of arteries in general.

After these are exhibited, an admirable series of illustrations of the surgical anatomy and operative surgery, side by side, of the ligature of arteries in particular, begining in plate vii., with the surgical anatomy and ligature of the ulnar and radial arteries, and ending in plate xvii., with the anatomy and ligature of the femoral artery under Poupart's ligament, of the external iliac and epigastric arteries.

The remaining eight plates are occupied with the several amputations through the joints, or disarticulations. These engravings, being duplicates of the Parisian originals, we need hardly say are splendidly executed and printed, and in every way adapted to the purpose for which they were designed. The letter press accompaniments are brief but concise and clear, and appear to be rendered into English faithfully and elegantly, without any sacrifice of perspicuity. They afford all the assistance that would be looked for in a work that is manifestly one of graphic demonstration and illustration, rather than of written description. The annotations of the Editors, which are very modestly appended, seem to be judicious and appropriate; and thus far likely to increase the value of the book to the American reader. We cannot take leave of them, however, without a word or two in relation to the foot-note on pages 19 and 20, in which, what *we* call the Philadelphia needle, is spoken of as the artery-needle, "which bears the name of Prof. Mott," and is "also known as the American needle." Now, although we have no violent objection to its designation as the American needle, we decidedly protest against its being called after its distinguished New York advocate and endorser. It is well known here that Prof. Mott had nothing whatever to do with the contrivance of the instrument in question, or with its first employment and description. The merit, such as it is, belongs to the late Dr. Joseph Parrish, of this city, who published a full account and engraving of it in the Eclectic Repertory, many years ago, (vol. 3, p. 229, Philadelphia, 1813.) Wherein he expressly and repeatedly attributes its invention to Dr. J. Hartshorne and himself, aided by the ingenuity of Mr. John Rorer, of this city.

We regret that the editors did not happen to refer to the additional article on aneurisms in the New York translation of Velpeau's Operative Medicine. The note at the foot of page 302, (vol. 2,) would have at once reminded them that Prof. Mott distinctly admits his favorite needle to have been the joint production of three Surgeons of Philadelphia, Drs. Parrish, Hewson and Hartshorne. Surely if a special name were needed, here was choice enough without wandering quite so far from home. The mere question of name is a matter of small moment practically, beyond a doubt; still it is a matter of history, in which is involved a principle not less important in small things than it is in great —we mean the principle of *suum cique.*

Outlines of the Nerves, with short descriptions, designed for the use of Medical Students; and *Outlines of the Arteries with short descriptions, designed for the use of Medical Students.* By JOHN NEILL, A. M., M. D., Surgeon to Wills Hospital, Demonstrator of Anatomy in the University of Pennsylvania. Second edition, Philadelphia, Barrington & Haswell, 1852.

We are glad to see that the favorable prognostications in relation to the early edition of these convenient "hand books" have been realized by a call for a new edition. As guides to the student in the lecture and dissecting room, we most cheerfully recommend them.

THE MEDICAL EXAMINER.

PHILADELPHIA, APRIL, 1852.

Several communications, and bibliographical notices, intended for this number, have been unavoidably postponed for want of room. We ask the indulgence of those who have sent their works to us for review.

MEDICAL NEWS.

Philadelphia County Medical Society.—At the Annual meeting held on the 20th of Jan. last, the following were elected Officers of the Society for the current year:

President—Samuel Jackson, M. D.

Vice-Presidents.—John F. Lamb, M. D., and Isaac Parrish, M. D.

Recording Secretary.—D. Francis Condie, M. D.

Corresponding Secretary.—Henry S. Patterson, M. D.

Treasurer.—Wm. Byrd Page, M. D.

Censors.—E. F. Leake, M. D., N. L. Hatfield, M. D., Lewis Rodman, M. D., Wm. N. Johnson, M. D., Wm. Henry, M. D.

At an adjourned meeting of the Society held February 10th, 1852, the following were elected:

Delegates to the American Medical Association.—Samuel Jackson, (Professor), Benj. S. Janney, Lewis Rodman, Chas. D. Meigs, Robert A. Given, Chas H. Bibighaus, Thos. H. Yardley, Thos. F. Betton, Wm. H. Klapp, Isaac Parrish, D. Francis Condie, Wm. Darrach, Jno. D. Logan, and Jno. F. Lamb.

To the Pennsylvania State Society.—Isaac Hays, Geo. B. Wood, Wm. Pepper, Geo. Fox, Samuel Jackson, Geo. W. Norris, Paul B. Goddard, John F. Lamb, A. Naudain, Samuel Jackson (Professor), G. Emerson, Henry Bond, Alfred Stille, Thomas D. Mütter, Jos. Pancoast, Wm. Mayburry, D. Francis Condie, Henry S. Patterson, Francis West, Isaac Remington, I. M. Pugh, Thos. F. Betton, Wm. R. Grant, Joseph Warrington, C. H. Bibighaus, Wm. Henry, Edward Janvier, and G. W. Patterson.

It was *Resolved*, that should any of the Delegates thus elected be unable to attend the approaching Session of the American Medical Asso-

ciation or State Society, or if he has been elected a Delegate from any other body to the former, he be requested and empowered to appoint some other member of this County Society as shall be able to attend as his substitute, and that such appointment, set forth in writing, and signed by the Delegate by whom it has been made, shall serve as the credential of said substitute.

DELAWARE COUNTY MEDICAL SOCIETY.—Officers elected for 1852.

President.—Dr. Jesse Young, Chester.

Vice-President.—Dr. S. A. Barton, Aston.

Secretary.—Dr. Robert K. Smith, Darby.

Corresponding Secretary.—Dr. George Martin, Concord.

Treasurer.—Dr. M. Emanuel, Marcus Hook.

Delegate to the American Medical Association.—Dr. Robt. K. Smith, Darby.

Delegates to the State Society.—Drs. Smith, Emanuel, Martin, and Barton.

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION, APPOINTED BY THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—John Rodman Paul, G. Emerson, Francis West, Alfred Stillé, John Neill, W. S. W. Ruschenberger, S. L. Hollingsworth, Geo. B. Wood, Caspar Wister, Isaac Hays, Rene LaRoche, John D. Griscom, John B. Tuft, Francis G. Smith, Anthony E. Stocker.

PHYSICIANS' PRESCRIPTIONS.—The report of the joint committee of the Philadelphia County Medical Society and Philadelphia College of Pharmacy, on this subject, published in our number for January last, was unanimously adopted by the County Society at its Annual meeting held January 20th, 1852, with this proviso:

"That nothing therein contained shall be construed into any sanction or countenance, direct or indirect, on the part of this Society, of the manufacture, sale, or use, by any one, or under any pretext, of quack or secret medicines."

APPOINTMENT IN THE UNIVERSITY OF NEW YORK.—We have great pleasure in announcing that the chair of Anatomy in the University of New York, vacated by the death of Dr. G. S. Pattison, has been filled by the appointment of Dr. WM. H. VAN BUREN; a gentleman admirably calculated to occupy, with credit to himself and profit to the school, so distinguished a post.

We make this announcement with the more pleasure, as it enables us

to correct an unintentional error in our last number, in regard to the *rumor* that application had been made to a gentleman in this city, prior to Dr. Van Buren. We have the best reason for believing this to be a mistake. Dr. Van Buren was the first choice after Dr. Pattison's death. Our information was derived, in the first instance, from a New York daily paper.

Itch Insect.—Most of our readers must have seen the *Acarus scabiei* under the microscope,or are at least acquainted with the figures of the creature which have been published. It appears that the male insect has, until lately, eluded observation, but has been at last dragged into light by M. Lanquetin, of Paris. The amiable parasite is described in the "Union Médicale," and is said to be only half the size of his better half.

Spread of Disease and fever in Ireland.—In our last we felt it our duty to allude to the alarming increase of contagious and infectious diseases amongst the poor in Ireland. We regret to find that our worst fears are likely to be realized, and that there is every prospect of that ill-fated land being further made desolate by fever, engendered by famine and neglect. According to the last report of the physicians of the South Dublin Union, the state of that workhouse is frightful to contemplate. Those gentlemen say that, in addition to the usual disease contingent on the season, the house has been visited by severe epidemic suffocative catarrh, also by a new form of febrile epidemic, in addition to a large amount of measles. They also reported forty-six cases of a malignant character, and that in the sick and infirm wards, the patients amounted to the formidable number of 1371. In consequence of this extraordinary increase of disease, the physicians have demanded additional help.—*London Lancet, Feb.* 14*th*, 1852.

American Medical Association.—The fifth annual meeting will be held at Richmond, Va., on Tuesday, May 4th, 1852.

All secretaries of societies, and of other bodies entitled to representation in this association, are requested to forward to the undersigned correct lists of their respective delegations as soon as they may be appointed.

The following is an extract from Art. II. of the constitution.

"Each local society shall have the privilege of sending to the association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half this number. The faculty of every regularly constituted medical college or chartered school of medicine shall have the privilege of sending two delegates. The professional staff of every chartered or municipal hospital containing a hun-

dred inmates or more, shall have the privilege of sending two delegates; and every other permanently organized medical institution of good standing shall have the privilege of sending one delegate."

The medical press of the United States is respectfully requested to copy.

P. CLAIRBORNE GOOCH, *One of the Secretaries,*
Bank-street, Richmond, Va.

DISCONTINUANCE OF THE BRITISH AMERICAN MEDICAL AND PHYSICAL JOURNAL.—We learn, with much regret, that this excellent Journal published at Montreal, Canada, under the able editorial conduct of A. HALL, M. D., has been discontinued.

ETHERIZATION IN PARTURITION NINETEEN YEARS AGO.—DR. WALTER CHANNING reports in the Boston Medical and Surgical Journal, for March 10th, 1852, the following interesting details on this point. Dr. Channing was recently attending a case, in which he administered ether with "excellent effects." In his visit following the delivery, he asked his patient "how many times she had used ether. She named them, and added that there was one other time in which she used it with great advantage. I asked when. Nineteen years ago, she said, she gave birth to her eldest son. Her labor lasted more than a fortnight. In the absence of her physician, her husband tried to find something which had given some relief in her former and first labor. He failed; but being engaged in preparing a chemical lecture, and making experiments with sulphuric ether, he thought he would try that. It was wiped freely over her face, and forehead, and *breathed.* To his surprise all her distress passed away—the spasmodic twitchings disappeared—violent voluntary effort, and which constituted so much of her misery then, and has in all subsequent labors, ceased to annoy her. Her physician arrived, and was so much pleased with the effects of the ether that it was employed during the rest of the labor. Her labor was now easy, was soon completed, and a stout living boy born. Such was her account of her first use of sulphuric ether to diminish or to abolish pain."

MEDICAL CIRCULARS.—Such is the competition in medical instruction, in this country, that even the schools of medicine of some of the States appear to be earnestly drumming up the people for customers. Circulars are actually flying through the post offices, announcing the facilities, economy, &c., of certain institutions for next November. This is taking time by the forelock; but it is positively injuring the medical character of the United States, to make such a show of ambition to gather up students.—*Boston Med. and Sur. Journ. 10th March.*

Remarkable Case of Inanition.—The following extraordinary occurrence is detailed in a late number of the Kingston (Ky.) Republican :

"On the 29th ult., a negro woman belonging to Mr. J. Harpending, of this County, got lost in the woods. Mr. H., thinking she had been stolen, offered a reward for her. He heard nothing of her until the 11th inst., when some boys who were hunting, found her, apparently dead. They returned home, and informed some gentlemen of the fact. Messrs. B. W. Harpending, E. George and one or two others, went in search of and found her, almost covered with snow; and supposing, as a matter of course, that she was dead, one of the party started to get a slide, while the others struck up a fire and awaited his return. One of them, wishing to see if decomposition had taken place, touched her with his cane, when, to his astonishment, she slightly moved her head. After applying the usual remedies she recovered sufficiently to converse with them. She stated that she had not eaten or drank anything but snow since she left home, and had been out in the weather all the time—fourteen days. She is in a fair way to recover. When she left home she was very fleshy, but when found was perhaps the most emaciated creature ever seen alive. These facts can be substantiated by the testimony of some of the most respectable men of our county."

University of Louisville Law Suit.—We learn with pleasure, that a suit pending between the City of Louisville and the Board of Trustees of the University, has been decided in favor of the latter. A provision of the new City charter had given the election of the Board of Trustees "to the people," but the Court has decided this to be unconstitutional, and "the administration of the school remains in the hands where it was."

Resignation of Dr. John Bell.—Our esteemed townsman has resigned his Chair of Theory and Practice in the Medical College of Ohio, and returns to Philadelphia at the close of the present term.

Obituary.—We announce with deep regret the sudden death of Dr. Wm. R. Grant, *Professor of Anatomy in Pennsylvania Medical College.* Dr. Grant, by his amiable deportment, high professional and moral worth, had secured the esteem of all who knew him. His loss will be deeply felt by a large circle of friends, and by the School of which he was a valued member.

NEW LIGHTS AND NEW LIVERS.

"When music, heavenly maid, was young,"
Rudely in ancient Greece she sung,
Now modern Grease usurps the song,
And smooths the rugged verse along.

In former times before the day
Of wisdom dawned upon our way,
And gave the medical profession
Her highest gifts in full possession,
Granting these choice Disciples' skill,
To bind on earth, by draught and pill,
And not to loose, as might befall,
This erewhile chosen Israel,
Before in chorus had been sung
"Jam Satis," ancient Fogydom,

Consumption, as tradition runs,
Made man expectorate his lungs;
Untaught there lay, by grace of God,
Salvation for him in a Cod;
Unmeet, the mystery to explain,
O'er which Theologians rack'd the brain,
How stretched upon Samaria's field,
His very soul in act to yield,
The dying traveller was restored,
When o'er his wounds the oil was poured.

Untaught that here, in meaning full,
Was hidden prophetic parable,
Which Providence would us inspire
To read by inspiration higher
Than e'er Joe Miller read Isaiah;
That figuratively fallen in strife,
'Twas Phthisis threatened here a life,
And fled when oil the wounds had dressed,
"Genuine cod liver, cold expressed."

And little thought those rugged hands,
That, round Newfoundland's stormy sands,
From Ocean's depths drew forth their prey,
All struggling to the light of day,
That Irish girls might harmless dine,
Spiritual and temporal combine,

To cheat Satanus of his toll,
By Friday's strengthening of the soul,
That they were adding to heaven's Will
An unexpounded Cod-icil.

Nor dreamed each fish at middle bore,
(When science taught us to explore,)
Both lives and liver for their turn,
Like archers true at Bannockburn,
That there displayed in full essence,
Was fount of rejuvenescence,
Which dull De Soto would have laid
In Florida's dark everglade;
When, heaven inspired, he might have drank,
Rich purling from Newfoundland's bank.

Unchanged as food, now altered its effect,
Now used by election, once by the elect;
Then, "Aid us Maria, in all ill,"
Now Gadus Morrhua be our fill,
And erring man, with all his hopes at stake,
Is once more aided by an act of faith,
And Vomicas which, in their day,
Resounded with the "pôt fêlé,"
All teach auscultors to admire,
The "cracked pot sound" one story higher.

E're struggling infants from the womb
Their circulation can resume,
(Provided they've not come too soon,)
The attending surgeon seeks the loin,
And carefully explores the groin,
And if one gland he can discover
A hair's breadth fuller than another,
No modern surgeon here would miss,
Tuberculous Diathesis,
And straightway at his solemn nod,
The infant's suckled by a Cod.

Hail modern Grease, be thine a fame,
More than thy prototype could claim,
While modern doctors they confess,
Extremâ cerâ Cod-icis. YOUNG PHYSIC.

RECORD OF MEDICAL SCIENCE.

SURGERY.

Wound of the Stomach with Protrusion.—By W. ASHBY, M. D., of Culpeper, C. H., U. S.—A negro boy, aged 6, the property of Mr. R. B., fell upon a pair of sheep-shears, which he had in his hand, whilst running down a hill. The instrument penetrated the stomach obliquely from above, just grazing the left side of the sternum and edges of the ribs, making a flaplike orifice in the integuments. I was called in consultation by my friend, Dr. P. C. Slaughter, and found nearly the whole stomach protruded, and discharging its contents through an aperture about three-quarters of an inch in length. Aware of the controversy which has so long existed among able surgeons, on either side, as to the propriety of stiching the stomach or bowels, the everted edges and gaping appearance of the wound in the stomach made it necessary, I thought, that a stitch should be taken. To avoid irritation, as much as possible, with the finest needle and silk I ventured to take a single stitch through the middle of the wound. Before I saw the case, Dr. S. had made some efforts to restore the organ to its natural position, but it did not occur to me at the time that I should have any serious difficulty in replacing it, at least after enlarging the orifice a little. But such was the unruly nature of the boy—his violent screaming and resistance, the nausea and vomiting which constantly attended the handling of the stomach—that notwithstanding I enlarged the orifice several times to a considerable extent, our best efforts not only failed to restore the organ, but it seemed to protrude the more. At this juncture, fearing the irritation resulting from further efforts, I suggested the use of chloroform, notwithstanding the necessary delay of having to send several miles for it. Whilst under its influence, I found it necessary again to enlarge the aperture slightly, and then had no farther difficulty, although the boy vomited as freely as before from handling the organ. The wound of the integument was rather ragged in its appearance, and of course a little bruised by our efforts. The wound of the stomach was brought directly opposite the tegumentary wound, and gently retained within its verge. A single stitch, patent lint, with cold water and a bandage completed the dressing. The patient was placed on his side, absolute rest enjoined, and soon afterwards a large dose of opium was administered. From the time of the accident until the completion of the dressing six hours intervened, and yet the boy retained his strength most remarkably. Under the influence of the opium our patient rested well the first night.

2d day. This morning the pulse is a little excited, and face flushed. V. S. to make a decided impression; and this was repeated twice during the day, and opium after each bleeding—absolute diet enjoined—but the boy desires no food.

3d. The wound had a healthy appearance, but tenderness of the abdomen and tympanitis greatly increased our fears as to the result. The pulse feeble and quick; the bowels not moved since the accident. Turpentine enema and a succession of blisters were ordered, and after the bowels were moved the opium was resumed.

4th. Our patient evidently improved, tympanitis and tenderness diminished, pulse more quiet, countenance and general aspect of things more encouraging; takes a little hot water tea this morning for the first time; gum water and opium continued.

5th. The wound not healed by the first intention; has a dark spot immediately over the wound of the stomach, and is discharging a very offensive sanious matter. A soft poultice, and the same prescription continued.

6th. The ligature came out this morning. The same prescription continued. From this date the boy gradually recovered, without any particular change in the treatment.

Remarks.—1st. It has occurred to me, that possibly it would have been better for me to have restored the stomach, at least partially, before the stitch was taken, as I ran the risk of breaking out the ligature by the subsequent efforts at reduction; and I am sure that the accumulation of gas, though some escaped with an audible sound several times, did not increase the difficulty.

2d. This case was admirably adapted to the use of chloroform, and illustrates most happily its incalculable value when used with discrimination.

3d. As your journal is eminently practical in its character, for the benefit of the younger members of the profession, it may not be amiss to allude briefly to what I conceive to be a most important principle in our profession, viz., that an *inflamed or diseased organ must have rest.* In this case, the stomach instinctively sensible of its wounded and disabled condition, refused most emphatically, for four days, to receive any nourishment—not even gum water—and but very little of anything for about ten days, notwithstanding the entreaties of master and friends, contrary to our orders.

An inflamed eye instinctively excludes the light from itself, so that the physician who interrogates Nature intelligently, at once gets the idea of confining his patient to a dark room, and thus putting the organ entirely to rest. When the lungs are inflamed the patient breathes as much as possible by the abdominal muscles, and lymph is thrown out, gluing the organ to the side, doubtless to prevent motion and friction as much as possible. The same thing is true of inflamed bowels; and because some constipation, the result of this principle exists, I have known great error—and I may say even death—to result from goading and stimulating the organ with drastic purgatives. This principle of rest is susceptible of very extensive application in practice; and any inflammation can be cured, I believe, to which it can be applied. The immortal Physic, always true to the laws of Nature, recognized this principle in the treatment of coxalgia and other diseases of the joints. In conformity to this important law of the animal economy, in the above case, we gave opium freely, to prevent nervous and vascular reaction; and by thus aiding in keeping the wounded organ in a profound state of repose, it contributed, it is believed, no little to the favorable result.—*Stethoscope, (Virginia,) United States.*